

Polo Chau

Legal name:
Duen Horng Chau

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 Associate Director, [MS in Analytics](#)
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 Associate Director of Corporate Relations, [The Center for Machine Learning Georgia Tech](#)

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POSITIONS

- Aug 2024 - Professor
[School of Computational Science & Engineering](#), Georgia Tech
- Jul 2021 - Adjunct Associate Professor
[School of Interactive Computing](#), Georgia Tech
- Oct 2019 - Director of Industry Relations
[Institute for Data Engineering and Science \(IDEaS\)](#), Georgia Tech
- Oct 2019 - Associate Director of Corporate Relations for Machine Learning
[The Center for Machine Learning](#), Georgia Tech
- Aug 2018 - Aug 2024 Associate Professor
[School of Computational Science & Engineering](#), Georgia Tech
- May 2014 - Associate Director
[MS in Analytics](#), Georgia Tech
- Aug 2018 - Aug 2021 Machine Learning Area Leader
[College of Computing](#), Georgia Tech
- Aug 2012 - Aug 2018 Assistant Professor
[School of Computational Science & Engineering](#), Georgia Tech
- Dec 2012 - Dec 2015 Adjunct Assistant Professor
[School of Interactive Computing](#), Georgia Tech

EDUCATION

- Aug 2012 **Ph.D. Machine Learning** Carnegie Mellon University
 Thesis: [Data Mining Meets HCI: Making Sense of Large Graphs](#)
 Award: [Carnegie Mellon SCS Dissertation Award, Honorable Mention](#)
 Committee: [Christos Faloutsos](#), [Jason Hong](#), [Niki Kittur](#), [Jiawei Han](#) (UIUC)
- May 2010 **M.S. Machine Learning** Carnegie Mellon University
- Aug 2005 **Masters of Human-Computer Interaction** Carnegie Mellon University
- 2004 **B.Eng. Information Engineering (Honors)** The Chinese Univ. of Hong Kong
Online Auction Fraud Detection
 Advisor: [Prof. Soung-Chang Liew](#)
- 2000 **Diocesan Boys' School** (high school) Hong Kong

RESEARCH AREAS AND THRUSTS

My research group **Polo Club of Data Science** innovates at the intersection of **machine learning** and **visualization** to synthesize **scalable, interactive, and trustworthy** tools that amplify human's ability to understand and interact with billion-scale data and machine learning models. Our research thrusts include: human-centered AI (interpretable, safe, fair AI; adversarial ML), large graph visualization and mining, cybersecurity and social good. [See all our projects at our group website](#). Some highlights:

Inclusive AI for Everyone: [Diffusion Explainer](#) (went viral) and [CNN Explainer](#) helps beginners learn deep learning models ([went viral; invited to SIGGRAPH](#)), [Dodrio](#) compares NLP attention mechanisms with linguistic knowledge, [GAN Lab](#) visualizes how generative adversarial network (GAN) works ([went viral; with Google](#)), [ActiVis](#) enables visual exploration of industry-scale deep neural networks ([deployed on Meta's ML platform used by 25% engineers; invited to SIGGRAPH](#)), [ManimML](#) (IEEE VIS Best Poster; went viral) communicates ML architectures with animation, [Communicating with Interactive Articles](#) examines interactive article design by synthesizing theory from education, journalism, and visualization.

Scalable Visual Discovery for Trustworthy and Interpretable AI: [Summit](#) and [NeuroCartography](#) scalably summarize and visualize learned concepts, [Bluff](#) pinpoints model vulnerabilities, [FairVis](#) visually discovers ML bias, [Recast](#) audits toxicity detection models, [comprehensive survey on visual analytics for deep learning](#) (best for practitioners and new researchers), [industry human-AI guidelines comparison](#).

Protecting AI models: [ShapeShifter](#) the first targeted physical attack ([highlighted by DARPA as state-of-the-art; with Intel](#)), [SHIELD](#) fast and practical defense ([KDD Audience Appreciation Award, Runner-up](#)), [SkeletonVis](#) reveals temporal and spatial incoherence of attacks, [UnMask](#) protects deep learning through robust feature alignment, [robust accented speech recognition \(with Amazon AWS AI\)](#), [REST](#) for robust sleep monitoring, [ADAGIO](#) for audio defense.

Novel datasets and tools: [TIGER](#) for evaluating graph robustness ([part of Nvidia Data Science teaching kit](#)), [MalNet](#) the largest graph- and image-based security datasets, [PEGASUS](#) billion-scale graph mining ([Open Source Software World Challenge, Silver Award](#)).

Social good (education, health, human trafficking): [Firebird](#) for fire risk prediction ([KDD Best Student Paper, Runner-up; with Atlanta Fire Rescue Department](#)), [Chronodes](#) for mobile health visual data exploration ([ACM TiiS Best Paper, Honorable Mention](#)), [CardiacAR](#) for mixed-reality heart surgical planning ([with Children's Healthcare of Atlanta](#)), [augmented coding](#) ([Best Poster, Chinese CHI](#)), [mixed-reality for learning programming](#) ([IDC Best Work-in-Progress, Honorable Mention](#)), [TrafficVis](#) fights human trafficking ([VIS Best Poster, Honorable Mention](#)), [Argo Scholar](#) for literature exploration in browsers ([VIS Best Poster, Honorable Mention](#)), extends [Argo Lite](#), [Autograding of D3 visualizations](#) ([VIS Best Poster](#)), [EnergyVis](#) explores ML model energy consumption, [PeopleMap](#) ([VIS Best Poster, Honorable Mention](#)), [Magic Crop](#) (auto-magically cropping headshot photos)

Cybersecurity & fraud detection: [Polonium](#) and [Aesop](#) malware detection over 37 billion machine-file relationships ([patented and deployed by Symantec; protects 120 million people](#)), [Marco](#) (SDM Best Student Paper), [NetProbe](#) eBay auction fraud detection ([covered by WSJ, USA Today, Washington Post, LA Times, etc.](#)), [LatentGesture](#) mobile authentication via touch signatures ([covered by Wired, Engadget, Gizmodo, Yahoo News, Atlanta Business Chronicle, etc.](#)), [D2M](#) detects adversarial movements in networks ([with Microsoft](#)), [insider trading pattern discovery](#) ([with Securities and Exchange Commission](#)), [FairPlay](#) (fraud and malware detection on Google Play).

Large graph visualization and mining: [Apolo](#) and [Facets](#) for mixed-initiative large graph sensemaking, [Visage](#) enables interactive visual graph querying, without writing complex code ([SIGMOD Best Demo, Honorable Mention](#)) [Vigor](#) summarizes query results.

AWARDS & HONORS

- 2023 Google Award for Inclusion Research, for *Scaling Up Educators' Capacities: Automating Visualization Assessment via Generative AI*
- 2023 BMVC Best Poster, for [Robust Principles](#)
- 2023 IEEE VIS Best Poster Award, for [ManimML](#)
- 2023 ACL Best Paper, Honorable Mention, for [DiffusionDB](#)
- 2023 Senior Faculty Outstanding Undergraduate Research Mentor Award. Georgia Tech.
- 2022 IEEE VIS Best Paper, Honorable Mention, for [TrafficVis](#)
- 2022 Outstanding Mid-Career Faculty Research Award. College of Computing, Georgia Tech.
- 2022 [NeuroCartography](#) selected to present at SIGGRAPH'22 as a top IEEE VIS'21 paper (top 1% of 442 submissions)
- 2021 Best Paper Award, NeurIPS 2021 Workshop on Bridging the Gap: From Machine Learning Research to Clinical Practice (Research2Clinics), for [GAM Changer](#)
- 2021 IEEE VIS Best Poster Award, for [autograding of D3 visualization](#)
- 2021 IEEE VIS Best Poster Honorable Award, for [Argo Scholar](#)
- 2021 IEEE VIS Best Poster Honorable Mention, for [TrafficVis](#)

- 2020 IEEE VIS Best Poster Research Award, Honorable Mention (VAST track), for [PeopleMap](#)
- 2020 [Facebook Faculty Research Award](#). PIs: Srijan Kumar, Polo Chau
- 2020 [CNN Explainer](#) selected to present at SIGGRAPH'21 as the only top IEEE VAST'20 paper
- 2019 Intel Outstanding Researcher Award
- 2019 IDC 2019 Best Work-in-Progress, Honorable Mention
- 2018 ACM TiiS 2018 Best Paper, Honorable Mention
- 2018 Chinese CHI 2018 Best Poster
- 2018 KDD Audience Appreciation Award, Runner-up
- 2018 James D. Lester III Family Award. College of Computing, Georgia Tech.
- 2018 [ActiVis](#) selected to present at SIGGRAPH'18 as the top IEEE VAST'17 paper
- 2017 SIGMOD 2017 Best Demo, Honorable Mention
- 2016 KDD 2016 Applied Data Science Best Student Paper, Runner-up
- 2015 Google Faculty Research Award.
- 2015 Outstanding Junior Faculty Research Award. College of Computing, Georgia Tech.
- 2015-16 James Edenfield Faculty Fellowship, with Munmun De Choudhury (IC)
- 2014 Yahoo Faculty Research and Engagement Program (FREP) Award by [Yahoo! Labs](#). ([GT press releases 1 & 2](#))
- 2014-15 Raytheon Faculty Fellowship, with [Rahul Basole](#) (IC).
- 2014 SIAM Data Mining (SDM) 2014 Best Student Paper award
- 2014 LexisNexis Dean's Excellence Award
- 2012 **Carnegie Mellon School of Computer Science Dissertation Award, Honorable Mention**
- 2010 **Open Source Software World Challenge, Silver Award (3rd place)**, for the [PEGASUS project](#) which mines billion-node graphs. U Kang, Duen Horng Chau, Christos Faloutsos
- 2009 - 2010 **Symantec Research Labs Graduate Fellowship**, covers full tuition and stipend. Re-selected, as one of the only three graduate students worldwide to receive the award.
- 2009 **Yahoo! Key Scientific Challenges Award**, in Information Retrieval, Algorithms, and Data Mining.
- 2008 - 2009 **Symantec Research Labs Graduate Fellowship**, covers full tuition and stipend.
- 2008 **Winner**, Symantec research competition (internal).
- 2006 **Best Presentation Award, 3rd Place**, PKDD'06.
- 2001, 2002, 2003 Dean's List
- 2002, 2003 Nominated for university scholarships

INDUSTRY POSITIONS & EXPERIENCES

- Summer 2014 **eBay, Search Science** San Jose
Visiting Professor
- Summer - Fall 2011 **Google, Ads Backend Team** Mountain View, CA
Ph.D. Software Engineer Intern Mentor: Dr. Arun Swami
- Fall 2009 **Symantec Research Labs** Los Angeles, CA
Ph.D. Research Intern Mentor: Mr. Carey Nachenberg
- Summer 2008 **Symantec Research Labs** Los Angeles, CA
Ph.D. Research Intern Mentor: Mr. Darren Shou
- 2005 - 2007 **Carnegie Mellon University, Human-Computer Interaction Institute** Pittsburgh, PA
Research Associate Supervisor: Prof. Brad Myers
- Summer 2003 **The Chinese University of Hong Kong, Lightwave Communications Lab** Hong Kong
Undergraduate Research Assistant
- 2002 - 2007 **Elfware Company** Hong Kong
System Consultant

OUTREACH INVITED TALKS & ACTIVITIES

- Nov 10, 2023 Mentor, EECS Rising Stars
- Mar 18, 2021 **Perspectives on the state-of-the-art visual analytics.** NSF convergence meeting on Analysis & Visualization for *The Future of Quantitative Research in the Social Sciences*. Host: Prof. Lisa Singh, Computer Science, Georgetown University.
- Mar 17, 2021 **Towards Secure and Interpretable AI: Scalable Methods, Interactive Visualizations, and Practical Tools.** *American Physical Society (APS) March Meeting 2021*.
- May 22, 2021 Working and Studying Aboard (in USA). Information Engineering Alumni Association (IEAA), The Chinese University of Hong Kong. Host: Albert Au Yeung.
- Nov 10, 2020 IDEaS panel on **Getting Started in Data Science and Machine Learning** (panelist), Georgia Tech
- July 28, 2020 **Teaching Databricks in the Classroom**
- May 27, 2020 Education panel on **Visualization for Data Science** (panelist), [Eurographics & EuroVis 2020](#)
- Mar 20, 2020 **Accelerated Data Science in the Classroom: Teaching Analytics and Machine Learning with RAPIDS** at Nvidia *GPU Technology Conference (GTC) 2020*.
- Dec 12, 2019 **Ask A Prof!** inaugural blog post of *On Teaching and Learning @ Georgia Tech*
- Jul 9, 2019 **Undergraduate Research Faculty Panel** (panelist), Georgia Tech
- Jun 4, 2019 **Visual Data Analytics** tutorial. Smart Grid Edge Analytics Workshop, Georgia Tech
- Aug 8, 2019 **Visual Data Analytics** tutorial. Foundation of Data Science – Summer School 2019, Georgia Tech
- Sept 26, 2018 Hands-on augmented reality (AR) research demonstration for elementary school students from [Charles R. Drew Charter School](#), using Microsoft HoloLens
- Aug 6, 2018 **Introduction to Machine Learning.** Summer workshop on data and scientific computing, Georgia Tech
- Aug 1, 2017 **Introduction to Machine Learning.** Summer workshop on data and scientific computing, Georgia Tech
- Mar 6, 2017 **10 Lessons Learned from Working with Tech Companies.** Undergraduate Consulting Club, Georgia Tech
- Apr 16, 2016 **10 Lessons Learned from Working with Tech Companies.** [Hacklytics](#), organized by Georgia Tech undergraduate students.
- Jun 16, 2015 **The Internet of Things (IoT) Joins the Enterprise: Strategies for Managing & Using All That Data.** All Analytics Academy.
- May 21, 2015 **Catching Bad Guys with Graph Mining and Visualization.** Center of Academic Excellence (NSA)
- Jun 13, 2014 **Graph Mining meets Human-Computer Interaction.** DIMACS REU Tutorial. Rutgers University.
- Jun 20, 2013 **Making sense of big data: combining data mining and visualization** Teachers Workshop (CS Principles - Big Ideas), organized by Institute for Computing Education (ICE), a partnership between the Georgia Department of Education and the College of Computing at Georgia Tech.

TEACHING

- Courses **CSE6242/CX4242: Data and Visual Analytics**, Georgia Tech. 1000+ students enrolled in each recent semester. Teaching it since 2013.
- Computing for Data Analytics: Methods and Tools**, CSE 6040, Fall 2014. Georgia Tech. Co-taught with [Dr. Da Kuang](#).
- Bee-Snap**, an undergraduate cross-semester **VIP project course (Vertically Integrated Projects)**. Georgia Tech. ECE-2811-VV4, ECE-3811-VV4, ECE-3812-VV4, ECE-4811-VV4, ECE-4812-VV4.
- Introduction to Computational Science and Engineering**. CSE 6001, Fall 2013, Georgia Tech. Co-taught with Rich Vuduc.
- Tutorials **HCI Meets Data Mining: Principles and Tools for Big Data Analytics**. Polo Chau. ACM Conference on Human Factors in Computing Systems (CHI) 2014. Toronto, Canada. April 24-May 1, 2014.
- Big Graph Mining for the Web and Social Media**. U Kang, Leman Akoglu, Polo Chau. The 7th ACM International Conference on Web Search and Data Mining (WSDM2014). New York City. February 24, 2014.
- Big Graph Mining: Algorithms, Anomaly Detection, and Applications**. U Kang, Leman Akoglu, Polo Chau. The 2013 IEEE/ACM International Conference on Advances in Social Networks Analysis and Mining (ASONAM). Niagra Falls, Canada, Aug 25-28, 2013.
- PhD Consort. Mentor [IEEE International Conference on Big Data \(IEEE BigData 2014\)](#)
- Guest lectures **Information Visualization (CS7450)**. Instructor: Prof. Alex Endert. Fall 2014. Georgia Tech.
- Data Mining for Malware Detection and Fraud Detection**. Computing and Society (CS 4001). Instructor: Prof. Jimeng Sun. Spring 2014. Georgia Tech.
- Web-scale malware detection & fraud detection**, and **Interactive graph exploration & mining** for *Massive Graph Analytics* (CSE 8803)

MGA). Instructor: Prof. David Bader. Fall 2012. Georgia Tech.

Data Warehousing and Data Mining for *Database Applications (15-415)*.

Instructor: Prof. Christos Faloutsos. Spring 2012. Carnegie Mellon University.

Web Search for *Science of the Web (15-396)*.

Instructor: Prof. Luis von Ahn, Brendan Meeder. Fall 2011. Carnegie Mellon University.

Making Sense of Large Networks for *Sensemaking: Cognitive, Social, and Technical Perspectives (05-899)*.

Instructor: Prof. Niki Kittur. Spring 2011. Carnegie Mellon University.

Teaching Assistant **Science of the Web (15-396)**.

Instructor: Prof. Luis von Ahn, Brendan Meeder. Fall 2011. Carnegie Mellon University.

Multimedia Databases and Data Mining (15-826).

Instructor: Prof. Christos Faloutsos. Spring 2010. Carnegie Mellon University.

PUBLICATIONS

Interactive Articles	Communicating with Interactive Articles. Fred Hohman, Matthew Conlen, Jeffrey Heer, Duen Horng (Polo) Chau. <i>Distill</i> , 2020.	Article Code
Journal	TrafficVis: Visualizing Organized Activity and Spatio-Temporal Patterns for Detecting Human Trafficking. Catalina Vajiac, Duen Horng Chau, Andreas Olligschlaeger, Rebecca Mackenzie, Pratheeksha Nair, Meng-Chieh Lee, Yifei Li, Namyong Park, Reihaneh Rabbany, Christos Faloutsos. <i>IEEE Transactions on Visualization and Computer Graphics (Proc. VIS'22)</i> , 2023. Best Paper, Honorable Mention	PDF IEEE
	Back-calculation of soil parameters from displacement-controlled cavity expansion under geostatic stress by FEM and machine learning. Fernando Patino-Ramirez, Zijie Jay Wang, Duen Horng Chau, Chloe Arson. <i>Acta Geotechnica</i> . 18, 1755–1768. 2023.	PDF
	Graph Vulnerability and Robustness: A Survey. Scott Freitas, Diyi Yang, Srijan Kumar, Hanghang Rong, Duen Horng Chau. <i>IEEE Transactions on Knowledge and Data Engineering (TKDE)</i> 2022.	PDF
	A Cluster-then-label Approach for Few-shot Learning with Application to Automatic Image Data Labeling. Renzhi Wu, Nilaksh Das, Sanya Chaba, Sakshi Gandhi, Duen Horng Chau, Xu Chu. <i>ACM Journal of Data and Information Quality (JDIQ)</i> . 14.3 (2022): 1-23.	PDF
	The Role of Interactive Visualization in Fostering Trust in AI. Emma Beauxis-Aussalet, Michael Behrisch, Rita Borgo, Duen Horng Chau, Christopher Collins, David Ebert, Mennatallah El-Assady, Alex Endert, Daniel A. Keim, Jörn Kohlhammer, Daniela Oelke, Jaakko Peltonen, Maria Riveiro, Tobias Schreck, Hendrik Strobel, Jarke J. van Wijk. <i>IEEE Computer Graphics and Applications</i> 41, no. 6 (2021): 7-12.	PDF
	Detection of Emerging Drugs Involved in Overdose via Diachronic Word Embeddings of Substances Discussed on Social Media. Austin P. Wright, Christopher M. Jones, Duen Horng Chau, Robert M. Gladden, Steven A. Sumner. <i>Journal of Biomedical Informatics (JBI)</i> , Volume 119, July 2021.	PDF
	NeuroCartography: Scalable Automatic Visual Summarization of Concepts in Deep Neural Networks. Haekyu Park, Nilaksh Das, Rahul Duggal, Austin P. Wright, Omar Shaikh, Fred Hohman, Duen Horng (Polo) Chau. <i>IEEE Transactions on Visualization and Computer Graphics (Proc. VIS'21)</i> , 2022. Invited to present at SIGGRAPH'22 as a top VIS'21 paper (1% of 442 submissions)	PDF Demo Code
	RECAST: Enabling User Recourse and Interpretability of Toxicity Detection Models with Interactive Visualization. Austin P. Wright, Omar Shaikh, Haekyu Park, Will Epperson, Muhammed Ahmed, Stephane Pinel, Diyi Yang, Duen Horng (Polo) Chau. <i>Proceedings of the ACM on Human-Computer Interaction</i> , Volume 5, Issue CSCW1, April 2021. Presented at The 24th ACM Conference on <i>Computer-Supported Cooperative Work and Social Computing (CSCW)</i> 2021.	PDF
	A Survey of Human-Centered Evaluations in Human-Centered Machine Learning. Fabian Sperrle, Mennatallah El-Assady, Grace Guo, Rita Borgo, Duen Horng Chau, Alex Endert, Daniel Keim. <i>Computer Graphics Forum (CGF)</i> , Vol. 40. No. 3. 2021. Presented at <i>EuroVis'21</i> .	PDF
	CNN Explainer: Learning Convolutional Neural Networks with Interactive Visualization. Zijie J. Wang, Robert Turko, Omar Shaikh, Haekyu Park, Nilaksh Das, Fred Hohman, Minsuk Kahng, and Duen Horng (Polo) Chau. <i>IEEE Transactions on Visualization and Computer Graphics (Proc. VIS'20)</i> , 2021. Went viral! 5700 Github stars — top of Github Trending The only VAST'20 paper invited to SIGGRAPH	PDF Demo YouTube Code
	Towards De-Anonymization of Google Play Search Rank Fraud. Mizanur Rahman, Nestor Hernandez, Bogdan Carbutar, Duen Horng (Polo) Chau. <i>IEEE Transactions on Knowledge and Data Engineering (TKDE)</i> . Feb, 2020.	PDF
	Summit: Scaling Deep Learning Interpretability by Visualizing Activation and Attribution Summarizations. Fred	PDF Demo

	Hohman, Haekyu Park, Caleb Robinson, Duen Horng (Polo) Chau. <i>IEEE Transactions on Visualization and Computer Graphics (Proc. VAST'19)</i> . 2020.	YouTube Code
	GAN Lab: Understanding Complex Deep Generative Models using Interactive Visual Experimentation. Minsuk Kahng, Nikhil Thorat, Duen Horng (Polo) Chau, Fernanda B. Viégas, and Martin Wattenberg. <i>IEEE Transactions on Visualization and Computer Graphics (Proc. VAST'18)</i> . 2019. Went viral! Open sourced with Google AI	Demo PDF YouTube
	Visual Analytics in Deep Learning: An Interrogative Survey for the Next Frontiers. Fred Hohman, Minsuk Kahng, Robert Pienta, Duen Horng Chau. <i>IEEE Transactions on Visualization and Computer Graphics</i> , 2018.	PDF Site Blog
	Chronodes: Interactive Multi-focus Exploration of Event Sequences. Peter J. Polack, Shang-Tse Chen, Minsuk Kahng, Kaya De Barbaro, Rahul Basole, Moushumi Sharmin, Duen Horng (Polo) Chau. <i>ACM Transactions on Interactive Intelligent Systems (TiIS) Special Issue on Interactive Visual Analysis of Human and Crowd Behaviors</i> . 2018. ACM TiIS 2018 Best Paper, Honorable Mention	PDF YouTube
	ActiVis: Visual Exploration of Industry-Scale Deep Neural Network Models. Minsuk Kahng, Pierre Andrews, Aditya Kalro, Duen Horng (Polo) Chau. <i>IEEE Transactions on Visualization and Computer Graphics (Proc. VAST'17)</i> . Jan 2018. [21% acceptance rate] Deployed on Facebook Machine Learning platform used by 25% engineers Invited to present at SIGGRAPH 2018 as a top VAST'17 paper (4 total)	PDF
	VIGOR: Interactive Visual Exploration of Graph Query Results. Robert Pienta, Fred Hohman, Alex Endert, Acar Tamersoy, Kevin Roundy, Chris Gates, Shamkant Navathe, Duen Horng (Polo) Chau. <i>IEEE Transactions on Visualization and Computer Graphics (Proc. VAST'17)</i> , Jan 2018. [21% acceptance rate]	PDF
	Search Rank Fraud and Malware Detection in Google Play. Mahmudur Rahman, Mizanur Rahman, Bogdan Carbutar, Duen Horng Chau. <i>IEEE Transactions on Knowledge and Data Engineering (TKDE)</i> 29(6), 1329. 2017	PDF
	Constraint based temporal event sequence mining for Glioblastoma survival prediction. Kunal Malhotra, Shamkant Navathe, Duen Horng Chau, Costas Hadjipanayis and Jimeng Sun. <i>Journal of biomedical informatics</i> , 16, 267-275. 2016	PDF
	Center of excellence for mobile sensor Data-to-Knowledge (MD2K). Santosh Kumar, Gregory D. Abowd, William T. Abraham, Mustafa al'Absi, J. Gayle Beck, Duen Horng Chau, Tyson Condie, David E. Conroy, Emre Ertin, Deborah Estrin, Deepak Ganesan, Cho Lam, Benjamin Marlin, Clay B. Marsh, Susan A. Murphy, Inbal Nahum-Shani, Kevin Patrick, James M. Rehg, Moushumi Sharmin, Vivek Shetty, Ida Sim, Bonnie Spring, Mani Srivastava and David W. Wetter. <i>Journal of the American Medical Informatics Association (JAMIA)</i> Jul 2015. DOI: 10.1093/jamia/ocv056	PDF
	Node Immunization on Large Graphs: Theory and Algorithms. Chen, C. and Tong, H. and Prakash, B.A. and Tsourakakis, C. and Eliassi-Rad, T. and Faloutsos, C. and Chau, D.H. <i>IEEE Transactions on Knowledge and Data Engineering (TKDE)</i> , 28(1), 113-126. 2015	PDF
	To Catch a Fake: Curbing Deceptive Yelp Ratings and Venues. Mahmudur Rahman, Bogdan Carbutar, Jaime Ballesteros, Duen Horng (Polo) Chau. <i>Statistical Analysis and Data Mining: The ASA Data Science Journal</i> , 8(3), 147-161. 2015.	PDF
	Understanding variations in pediatric asthma care processes in the emergency department using visual analytics. Rahul C. Basole, Mark L. Braunstein, Vikas Kumar, Hyunwoo Park, Minsuk Kahng, Duen Horng (Polo) Chau, Acar Tamersoy, Daniel A. Hirsh, Nicoleta Serban, James Bost, Burton Lesnick, Beth L. Schissel, Michael Thompson. <i>Journal of the American Medical Informatics Association (JAMIA)</i> 2015. DOI: 10.1093/jamia/ocu016	PDF
	GLO-STIX: Graph-Level Operations for Specifying Techniques and Interactive eXploration. Charles D. Stolper, Minsuk Kahng, Zhiyuan Lin, Florian Foerster, Aakash Goel, John Stasko, and Duen Horng Chau. <i>IEEE Transactions on Visualization and Computer Graphics</i> , 20(12), 2320-2328. 2014.	PDF YouTube Code
	SharkFin: Spatio-temporal mining of software adoption and penetration. Evangelos E. Papalexakis, Tudor Dumitras, Duen Horng Chau, B. Aditya Prakash, Christos Faloutsos. <i>Social Network Analysis and Mining (SNAM)</i> , 4(1), 1-15. 2014.	PDF
	Large Scale Insider Trading Analysis: Patterns and Discoveries. Acar Tamersoy, Elias Khalil, Bo Xie, Stephen L. Lenkey, Bryan R. Routledge. Duen Horng Chau, Shamkant B. Navathe. <i>Social Network Analysis and Mining (SNAM)</i> , 4(1), 1-17. 2014.	PDF
Preprints	Mobile Fitting Room: On-device Virtual Try-on via Diffusion Models. Justin Blalock, David Munechika, Harsha Karanth, Alec Helbling, Pratham Mehta, Seongmin Lee, Duen Horng Chau. arXiv.	PDF
	Point and Instruct: Enabling Precise Image Editing by Unifying Direct Manipulation and Text Instructions. Alec Helbling, Seongmin Lee, Polo Chau. arXiv.	PDF
	UniTable: Towards A Unified Framework For Table Structure Recognition Via Self-Supervised Pretraining. ShengYun Peng , Seongmin Lee, Xiaojing Wang, Raji Balasubramaniyan, Duen Horng Chau.	PDF
Conference	Energy Transformer. Benjamin Hoover, Yuchen Liang, Bao Pham, Rameswar Panda, Hendrik Strobelt, Duen Horng Chau, Mohammed J. Zaki, Dmitry Krotov. NeurIPS 2023.	PDF
		PDF

Robust Principles: Architectural Design Principles for Adversarially Robust CNNs. ShengYun Peng, Weilin Xu, Cory Cornelius, Matthew Hull, Kevin Li, Rahul Duggal, Mansi Phute, Jason Martin, Duen Horng Chau. British Machine Vision Conference (BMVC) 2023.

[Best Poster](#)

Concept Evolution in Deep Learning Training: A Unified Interpretation Framework and Discoveries. Haekyu Park, Seongmin Lee, Benjamin Hoover, Austin P. Wright, Omar Shaikh, Rahul Duggal, Nilaksh Das, Kevin Li, Judy Hoffman, Duen Horng Chau. CIKM 2023.

[PDF](#)

VisGrader: Automatic Grading of D3 Visualizations. Matthew Hull, Vivan Pednekar, Hannah Murray, Nimisha Roy, Emmanuel Tung, Susanta Routray, Connor Guerin, Justin Chen, Zijie J. Wang, Seongmin Lee, Mahdi Roozbahani, Duen Horng (Polo) Chau. VIS 2023.

[PDF](#)

DiffusionDB: A Large-scale Prompt Gallery Dataset for Text-to-Image Generative Models. Zijie J. Wang, Evan Montoya, David Munechika, Haoyang Yang, Benjamin Hoover, Duen Horng (Polo) Chau. ACL, Jul 2023.

[PDF](#)

[Best Paper, Honorable Mention](#)

GAM Coach: Towards Interactive and User-centered Algorithmic Recourse. Zijie J. Wang, Jennifer Wortman Vaughan, Rich Caruana, Duen Horng (Polo) Chau. CHI, Apr 2023.

[PDF](#)
[ACM](#)

Lessons from the Development of an Anomaly Detection Interface on the Mars Perseverance Rover using the ISHMAP Framework. Austin P Wright, Peter Nemere, Adrian Galvin, Duen Horng Chau, Scott Davidoff. IUI, Mar 2023.

[PDF](#)
[ACM](#)

Explaining Website Reliability by Visualizing Hyperlink Connectivity. Seongmin Lee, Sadia Afroz, Haekyu Park, Zijie J. Wang, Omar Shaikh, Vibhor Sehgal, Ankit Peshin, Duen Horng Chau. VIS, Oct 2022.

[PDF](#)
[IEEE](#)

Visual Auditor: Interactive Visualization for Detection and Summarization of Model Biases. David Munechika, Zijie J. Wang, Jack Reidy, Josh Rubin, Krishna Gade, Krishnamurthy Kenthapadi, Duen Horng Chau. VIS, Oct 2022.

[PDF](#)

TimberTrek: Exploring and Curating Trustworthy Decision Trees with Interactive Visualization. Zijie J. Wang, Chudi Zhong, Rui Xin, Takuya Takagi, Zhi Chen, Duen Horng Chau, Cynthia Rudin, Margo Seltzer. VIS, Oct 2022.

[PDF](#)

Interpretability, Then What? Editing Machine Learning Models to Reflect Human Knowledge and Values. Zijie J. Wang, Alex Kale, Harsha Nori, Peter Stella, Mark Nunnally, Duen Horng Chau, Mihaela Vorvoreanu, Jennifer Wortman Vaughan, Rich Caruana. KDD, Aug 2022.

[PDF](#)

Hear No Evil: Towards Adversarial Robustness of Automatic Speech Recognition via Multi-Task Learning. Nilaksh Das, Duen Horng Chau. Interspeech, Sep 2022.

[PDF](#)

MalNet: A Large-Scale Image Database of Malicious Software. Scott Freitas, Rahul Duggal, Duen Horng Chau. CIKM 2022.

[PDF](#)

Context-aware Traffic Flow Forecasting in New Roads. Namhyuk Kim, Dong-Kyu Chae, Jung Ah Shin, Sang-Wook Kim, Duen Horng Chau, Sunghwan Park. CIKM 2022.

Listen, know and spell: Knowledge-infused subword modeling for improving ASR performance of out-of-vocabulary (OOV) named entities. Nilaksh Das, Monica Sunkara, Dhanush Bekal, Duen Horng Chau, Sravan Bodapati, Katrin Kirchhoff. ICASSP, 2022.

[PDF](#)

A Search Engine for Discovery of Scientific Challenges and Directions. Dan Lahav, Jon Saad Falcon, Bailey Kuehl, Sophie Johnson, Sravanthi Parasa, Noam Shomron, Duen Horng Chau, Diyi Yang, Eric Horvitz, Daniel S. Weld, Tom Hope. AAAI, 2022.

[PDF](#)

A Large-Scale Database for Graph Representation Learning. Scott Freitas, Yuxiao Dong, Joshua Neil, Duen Horng (Polo) Chau. *Neural Information Processing Systems (NeurIPS), 2021.*

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[IBM Student Travel Fellowship](#)

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	Towards Automatic Grading of D3.js Visualizations. Matthew Hull, Connor Guerin, Justin Lu Chen, Susanta Kumar Routray, Duen Horng Chau. <i>Poster Abstract. IEEE VIS 2021</i> . IEEE VIS 2021 Best Poster	PDF Poster YouTube
	Argo Scholar: Interactive Visual Exploration of Literature in Browsers. Kevin Li, Haoyang Yang, Anish Upadhayay, Zhiyan Zhou, Jon Saad-Falcon, Duen Horng Chau. <i>Poster Abstract. IEEE VIS 2021</i> . IEEE VIS 2021 Best Poster, Honorable Mention	PDF Demo YouTube Code
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	ADAGIO: Interactive Experimentation with Adversarial Attack and Defense for Audio. Nilaksh Das, Madhuri Shanbhogue, Shang-Tse Chen, Li Chen, Michael E. Kounavis, Duen Horng (Polo) Chau. <i>European Conference on Machine Learning & Principles & Practice of Knowledge Discovery in Databases (ECML-PKDD), 2018</i> . Dublin, Ireland. Sep 10-14, 2018.	PDF
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OPAvion: Mining and visualization in large graphs. Leman Akoglu, Duen Horng (Polo) Chau, U Kang, Danai Koutra, Christos Faloutsos. *ACM SIGMOD Conference 2012*. May 20-24, 2012. Scottsdale, Arizona, USA. [PDF](#) [Poster](#)

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GRAPHITE: A Visual Query System for Large Graphs. Duen Horng (Polo) Chau, Christos Faloutsos, Hanghang Tong, Jason I. Hong, Brian Gallagher, Tina Eliassi-Rad. *International Conference on Data Mining (ICDM) 2008*. Dec 15-19, 2008. Pisa, Italy. [PDF](#) [YouTube](#)

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PH.D. STUDENTS

Advisor [Alec Helbling](#), ML PhD
Summer 2023 - present.

[Matthew Hull](#), ML PhD
Summer 2023 - present.

Outstanding Instructional Associate Teaching award

[Shengyun \(Anthony\) Peng](#), CS PhD
Spring 2022 - present.

[Seongmin Lee](#), CS PhD
Fall 2021 - present.

[Ben Hoover](#), ML PhD
Fall 2021 - present.

[Rahul Duggal](#), CS PhD
Fall 2019 - Summer 2022. Co-adv: Jimeng Sun.
Thesis: *Robust Efficient Edge AI: New Principles and Frameworks for Empowering AI on Edge Device*
Proposal: 10/22/21. Defense: 07/14/22

Amazon Post Internship Fellowship

Now: Applied Scientist II, AWS AI Computer Vision Group

[Austin Wright](#), ML PhD
Fall 2019 - present.

ORISE Fellow, National Center for Injury Prevention and Control

GT-GSU Public Interest Technology (PIT) Fellow, 2020

Georgia Tech President's Fellowship

[Zijie \(Jay\) Wang](#), ML PhD
Fall 2019 - present.

Apple Scholar, 2023. Only 22 awardees in AI/ML PhD fellowship worldwide.

JPMorgan AI PhD Fellowship, 2022

Haekyu Park. CS PhD.

Fall 2018 - Fall 2023.

Thesis: *Interactive Scalable Discovery of Concepts, Evolutions, and Vulnerabilities in Deep Learning*

Proposal: 11/15/22.

Rising Star in EECS 2022

JPMorgan AI PhD Fellowship, 2021

Now: Machine Learning Engineer, Stripe

Scott Freitas. ML PhD.

Fall 2018 - Fall 2021.

Thesis: *Developing Robust Models, Algorithms, Databases, and Tools with Applications to Cybersecurity and Healthcare*

Proposal: 05/12/21. Defense: 12/07/21

IBM PhD Fellowship, 2021

NSF Graduate Research Fellowship, 2018-2021

Raytheon Graduate Research Assistantship, 2019. \$25k.

Now: Senior Applied Scientist, Microsoft

Nilaksh Das. CSE PhD.

Fall 2017 - Spring 2022.

Thesis: *Understanding, Fortifying and Democratizing AI Security*

Proposal: 04/14/21. Defense: 04/13/22

Best Dissertation Award, College of Computing, Georgia Tech

Now: Applied Scientist, Amazon Web Services (AWS)

Fred Hohman. CSE PhD.

Summer 2016 - Fall 2020.

Thesis: *Interactive Scalable Interfaces for Machine Learning Interpretability*

Proposal: 12/02/19. Defense: 10/06/20

SIGCHI Outstanding Dissertation Award, 2022

Best Dissertation Award, College of Computing, Georgia Tech

NASA Space Technology Research Fellowship 2018-2021. ~\$80k/yr

Georgia Tech President's Fellowship

Now: Research Scientists, Apple

Shang-Tse Chen. CS PhD. Co-adv: Nina Balcan.

Fall 2014 - Fall 2019.

Thesis: *AI-infused Security: Robust Defense by Bridging Theory and Practice*

Proposal: 11/16/18. Defense: 08/19/19

IBM PhD Fellowship, 2018-2020

Symantec Research Labs (SRL) Graduate Fellowship 2016, runner-up

Now: Assistant Professor, National Taiwan University (NTU)

Minsuk (Brian) Kahng. CS PhD.

Fall 2013 - Fall 2019.

Thesis: *Human-Centered AI through Scalable Visual Data Analytics*

Proposal: 10/15/18. Defense: 10/08/19

Best Dissertation Award, College of Computing, Georgia Tech

Google PhD Fellowship, 2018-2020

NSF Graduate Research Fellowship, 2014-2017

Now: Research Scientist, Google

Robert Pienta. CSE PhD.

Spring 2013 - Fall 2017.

Thesis: *Adaptive Visual Network Analytics: Algorithms, Interfaces, and Systems for Exploration and Querying*

Proposal: 4/6/16. Defense: 6/27/17

Now: Data Science Manager, Intuit

Acar Tamersoy. CS PhD. Co-adv: Sham Navathe.

Spring, 2013 - Spring 2016.

Thesis: *Graph-based Algorithms and Models for Security, Healthcare, and Finance*

Proposal: 11/6/15. Defense: 3/11/16.

Symantec Research Labs (SRL) Graduate Fellowship, 2014-2015

Now: Senior Researcher Scientist, NortonLifeLock Research Group

Co-advisor [Chad Stolper](#). CS PhD. Adv: [John Stasko](#).
 Spring 2014 - Summer 2016.
 Thesis: Graph-Level Operations: A High-Level Interface for Graph Visualization Specification
 Proposal: 5/1/15. Defense: 7/1/16.
Now: Software Engineer, Google

Research Project Advisor
 Abhijit Suprem. CS. Fall 2017.
 Liexiao (Richard) Ding. ISyE. Adv: [Nagi Gebraeel](#). Fall 2016.
 Oliver Haimson. Ph.D. Informatics Department. UC Irvine. Co-adv: Bistra Dilkina, Matt Hinds-Aldrich. Summer 2015.
 Wenwen Chang. Ph.D. City and Regional Planning. Co-adv: Bistra Dilkina, Matt Hinds-Aldrich. Summer 2015.
 Can Hantas. Co-adv: Sham Navathe. Spring 2014
[Dr. Jaegul Choo](#). CSE. Adv: [Haesun Park](#). Spring 2013 - Fall 2014.
Now: Assistant Professor, Korea University
[Kunal Malhotra](#). CS. Adv: [Sham Navathe](#). Spring 2013 - Spring 2014.
 Kaeser Puryear Sabrin. CS. Fall, 2013.
 Wei (Tina) Zhou. IC. Adv: Jarek Rossignac. Spring 2013 - Fall 2013.
 Bo Xie. CSE. Fall 2012 - Spring 2013.

POST DOCS

[Dongkyu Chae](#). Fall 2019 - Summer 2020
Now: Assistant Professor, Hanyang University, South Korea

MASTERS STUDENTS

MS Thesis Advisor [Elias Khalil](#). CSE. Spring 2013 - Spring 2014.
 Thesis: Optimizing the Structure of Diffusion Networks: Theory and Algorithms
Now: Assistant Professor, University of Toronto
 Marshall D. Williamson Fellowship, for well-rounded second-year Masters' students, Spring 2014
 Donald V. Jackson Fellowship, for well-rounded first year Masters' students, Spring 2013
Now: CSE/CoC PhD student

Research Proj Advisor [Aeree Cho](#), CS MS. Spring 2024 - present.
[Alex Karpekov](#), CS MS. Spring 2024 - present.
[Justin Blalock](#), CS MS. Fall 2023 - present.
[Harsha Karanth](#), CS MS. Fall 2023 - present.
[Mansi Phute](#), CS MS. Summer 2023 - present.
 Marshall D. Williamson Fellowship, for well-rounded second year Masters' students, Spring 2024
[Nemath Ahmed](#). CS MS. Spring 2023.
[Chakri RVK](#). Analytics MS. Summer 2022 - Spring 2023.
[Shengyun \(Anthony\) Peng](#). CSE MS. Summer 2021 - Fall 2021.
[Sivapriya Vellaichamy](#). Analytics MS. Summer 2021 - Spring 2022.
Now: AI Research Tech - Senior Associate, JP Morgan Chase
 Soo Hyung Park. MS CS. Summer 2021.
 Isha Shah. MS CS. Summer 2021.
[Jonathan Leo](#). MS CS. Spring 2021 - Spring 2022.
[Sushanto Praharaj](#). MS CSE. Summer 2020, Spring 2021.
 Marshall D. Williamson Fellowship, for well-rounded second year Masters' students, Spring 2021
Now: Software Engineer, Salesforce
[Aiswarya Bhagavatula](#). MS CSE. Summer 2020, Spring 2021.

Now: Analyst, Goldman Sachs

Pruthvi Perumalla. MS CS. Summer 2020.

Now: Software Engineer, Microsoft

Anmol Chhabria. MS CSE. Spring 2019.

Donald V. Jackson Fellowship, for well-rounded first year Masters' students, Spring 2019

Now: Senior Data Scientist, Shopify

Kristina Marotta. OMS CS. Fall 2018.

Varun Bezzam. MS CS. Fall 2017 - Fall 2018

Now: Senior Software Engineer, Lyft

Madhuri Shanbhogue. MS CS. Spring 2017 - Spring 2018

Now: Software Engineer ML, Google

Prasenjeet Biswal. MS CS. Spring 2017 - Fall 2018

Now: Software Engineer II (Machine learning), Yahoo

Nilaksh Das. MS CSE. Spring 2017

Chirag Tailor. MS CS. Summer 2016 - Spring 2017.

Michael Phillips. MS Analytics. Fall 2016.

Peter Polack. MS CS. Fall 2015 - Fall 2016.

Now: PhD student, UCLA

Meera Kamath. MS CS. Spring 2016.

Now: Microsoft

Apurv Verma. MS CS. Spring 2016.

Michael Madaio. MS Digital Media. Summer 2015. Co-adv: Bistra Dilkina, Matt Hinds-Aldrich.

Now: HCI Ph.D. student, Carnegie Mellon

Xiang (Sean) Cheng. MS Computer Science & Physics. Emory University. Summer 2015. Co-adv: Bistra Dilkina, Matt Hinds-Aldrich.

Now: Nokia Technologies

Alexandre Yahi. MS CS Summer 2014 - Spring 2015

Now: PhD student, Biomedical Informatics, Columbia University

Antoine Chassang. MS CS. Summer 2014 - Spring 2015

Louis Raynaud. MS CS. Summer 2014 - Spring 2015

Now: Wavestone

Hugo Duthil. MS CS. Summer 2014 - Spring 2015

Now: Criteo

Mayank Gupta. Co-adv: Rahul Basole. MS CS. Fall 2014 - Spring 2015.

Now: Apple

Florian Foerster. MS HCI. Spring 2014 - Fall 2014.

Now: Facebook software engineer

Ganesh Parameswaran. MS CSE. Fall 2013.

Now: Yahoo! software engineer

Changhyun Lee. MS CSE. Adv: Haesun Park. Fall 2012 - Spring 2013.

Now: Google software engineer

Neha Reddy. MS Info Networking, CMU. 2009.

Now: Cvent software engineer

Karthik Thiyagarajan. MS Info Networking, CMU. 2009.

Now: QuantFind software engineer

Masters Project Shan Li. MS HCI. Fall 2014 - Spring 2015.

Project: A Course/Major Recommendation System for Georgia Tech Students

Placed: Oracle

Srishti Gupta. MS CS. Spring 2014 - Spring 2015.

Project: A Study of Venture Capitalists through Graph Analysis

Now: [Apple](#)

Aakash Goel. MS CSE. Spring, Fall 2013.

Project: Improvements to Apolo (a Machine Learning Based Graph Visualization and Analysis System for Large Network Data)

Placed: [Google software engineer](#)

MS Special Problem Vivek Nahbi. MS CS. Spring 2014 - Summer 2014.

Project: Systematic Integration of Large Data Sets for Improved Decision-Making.

Jon Greg. MS CSE. Fall 2012.

Project: Anomaly detection for graphs

Zhen (Henry) Wang. MS CSE. Fall 2012.

Project: Large graph decomposition

Ziaohui Luo. IC. Fall 2012.

Project: Graph visualization on mobile devices

INSTRUCTIONAL ASSOCIATE RESEARCHER

[Matthew Hull](#), Instructional Associate, Georgia Tech. May 2021 - May 2023.

UNDERGRADUATE STUDENTS

Research Advisor [Chae Yeong \(Grace\) Kim](#). CS. Spring 2024 - present.

[Aishwarya Chakravarthy](#). CS. Fall 2023 - present.

[Sri Ranganathan Palaniappan](#). CS. Fall 2023 - present.

[Mahesh Natamai](#). CS. Spring 2023.

[Sagar Sadak](#). CS. Fall 2022 - present.

[Shirling Xu](#). CS. Fall 2022.

[David Munechika](#). CS BS/MS. Fall 2021 - present.

[Stamps President's Scholar](#)

[Pratham Mehta](#). CS BS/MS. Fall 2021 - present.

[Outstanding Legacy Leadership Award, Spring 2024](#)

[Outstanding Second Year Leadership Award, Spring 2023](#)

[Evan Montoya](#). CS. Fall 2021 - present.

[Stamps President's Scholar](#)

[Carter Coté](#). CS. Fall 2021.

[Megan Dass](#). CS. Fall 2020 - Spring 2023.

[2022 Adobe Women in Technology \(WIT\) Scholar](#)

[Outstanding Freshman Award, College of Computing](#)

[Featured in Georgia Tech Compiler news story \[Cropping Made Easy\]\(#\), for the MagicCrop system that automatically crop headshot photos using AI.](#)

[Alex Yang](#). CS BS/MS. Fall 2020 - Spring 2023.

[Donald V. Jackson Fellowship Award \(outstanding 1st year MS\)](#)

[Kevin Li](#). CS. Fall 2020 - Spring 2023.

[Undergraduate Teaching Assistant of the Year, Georgia Tech.](#)

[Outstanding Undergraduate Teaching Assistant, College of Computing, Georgia Tech.](#)

[Provost's Academic Excellence Award, Georgia Tech.](#)

Now: [ML PhD student, Carnegie Mellon](#)

[Sasha Richardson](#). CS undergraduate student, Fayetteville State University. Summer 2020.

[Robert Firstman](#). CS. Fall 2019 - Spring 2020.

Now: Software Engineer, Meta

Robert Turko. CS. Fall 2019 - Spring 2021.

Now: Software Engineer, Google

Outstanding Senior Award, College of Computing.

Jon Saad-Falcon. CS. Fall 2019 - Fall 2020.

Now: CS PhD student, Stanford

Donald V. Jackson Fellowship, for well-rounded first year Masters' students, Spring 2021

Zhiyan (Frank) Zhou. CS. Fall 2019 - Spring 2022.

Anish Upadhayay. CS. Fall 2019 - Spring 2022.

Omar Shaikh. CS. Fall 2018 - Spring 2022.

Now: CS Ph.D. student, Stanford

Awarded Sigma Xi Best Undergraduate Research Award (Spring 2021)

Outstanding Freshman, College of Computing, Georgia Tech. 2020.

Awarded President's Undergraduate Research Travel Award (PURA) (\$1500, Spring'20)

Will Epperson. CS. Spring 2019 - Spring 2020.

Now: CS Ph.D. student, Carnegie Mellon University

Stamps President's Scholar, Aug 2016-May 2020. Full-ride scholarship, awarded to 40 students.

Awarded President's Undergraduate Research Travel Award (PURA) (\$1500, Fall'19)

Jonathan Leo. CS. Spring 2019 - Fall 2020.

Awarded President's Undergraduate Research Travel Award (PURA) (\$1500, Fall'19)

Ángel (Alex) Cabrera. CS. Spring 2018 - Spring 2019.

Now: HCI Ph.D. student, Carnegie Mellon University

NSF Graduate Research Fellowship, 2019-

Co-recipient of Love Family Scholarship (\$10,000 total), highest award Georgia Tech gives to a graduating senior. 2019.

Stamps President's Scholar, Aug 2015-May 2019. Full-ride scholarship, awarded to 10 students.

Siwei (Bob) Li. CS. Fall 2017 - Spring 2020.

Now: Software Engineer, Google

Outstanding Undergraduate Research, College of Computing, Georgia Tech. 2020.

Awarded President's Undergraduate Research Travel Award (PURA) (\$1500, Fall'19)

Sudeep Agarwal. CS. Fall 2017 - Fall 2018.

Now: Machine Learning Engineer, Apple

Dezhi (Andy) Fang. CS. Fall 2015 - Spring 2018.

Now: Software Engineering, Citadel

Outstanding Undergraduate Research, College of Computing, Georgia Tech. 2018.

Outstanding Undergraduate Researcher, Georgia Tech. 2018.

Research supported by Faculty Materials, Supplies and Travel Grants for Undergraduate Research (\$1000, Summer'17)

Awarded President's Undergraduate Research Travel Award (PURA) (\$1500, Fall'16)

SIGMOD'16 Undergraduate Research Poster Competition Finalist

Yili Hui. CS. Fall 2017 - Spring 2018.

Now: Software Engineer, Microsoft

Joon Kim. CS. Fall 2017 - Spring 2019.

Now: Mailchimp

Joseph Spall. CS. Fall'17.

Now: MS ECE student, Georgia Tech

Michael Aki. CS. Fall'17.

Now: Software Engineer, Amazon

D'arcy (Quintin) Roper. CS. Fall'17.

Now: Technology Solutions Senior Consultant, Credera

Kshitij Kulkarni. EE. Fall 2016 - Spring 2017.

Now: EECS PhD student, UC Berkeley

Jake Williams. CS. Spring 2016 - Spring 2017.

Now: Machine Learning Engineer, Square

Fu Shen. CS. Summer 2016. Co-adv: Fang (Cherry) Liu.

Now: MS CSE student, Georgia Tech

Matthew Keezer. CS. Fall 2015 - Spring 2017.

Now: Staff Software Engineer, IBM

Jay Kamat. CS. Fall 2015 - Spring 2016.

Now: Performance and Capacity Engineer, Meta

Neil Goel. CS. Fall 2015.

Now: Software Engineer, Google

Francisco Zampieri. CS. Fall 2015.

Now: Application Developer Lead, Fiserv

Mika Munch. CS. Fall 2015.

Now: Service Design Lead, Banking, NCR

Goutam Venkatramanan. CS. Fall 2015.

Now: Software Engineer, Meta

Sam Ford. CS. Summer 2015 - Fall 2017.

Now: Machine Learning Engineer, Cash App

Ryan Birmingham. CS. Summer - Fall 2015.

Now: Systems Software Engineer, Emory University School of Medicine

Junxian (Rupert) Wu. CS. Summer 2015.

Now: Software Engineer, Google

Arman Rye. ISyE. Fall 2014 - Spring 2015.

Now: Cloud Customer Engineer, Google

Gustavo Oliver. ISyE. Fall 2014 - Spring 2015.

Now: Senior Data Engineer, Orchard

Nathan Dass. CS. Fall 2014 - Fall 2017.

Now: Senior Software Engineer, Google AI

2nd Place InVenture Prize 2017. \$10,000 award

Research supported by Faculty Materials, Supplies and Travel Grants for Undergraduate Research (\$1000, Summer'17)

Wearable Computing Center Grant (with Samuel Clarke) (~\$1000, Fall 2014)

Paras Jain. CS. Fall 2014 - Spring 2017.

Now: EECS PhD student, UC Berkeley

Awarded President's Undergraduate Research Travel Award (PURA) twice (Spring'16: \$1000; Spring'17: \$1500)

Yiqi (Victor) Chen. CS. Fall 2013 - Spring 2016.

Now: Software Engineer, Meta

Awarded President's Undergraduate Research Travel Award (PURA) (\$1000, Spring'15)

Zhiyuan (Jerry) Lin. CS. Spring 2013 - Spring 2016.

Now: Research Scientist, Meta (after CS PhD, Stanford)

Computing Research Association's (CRA) Outstanding Undergraduate Researcher Award, finalist

Outstanding Undergraduate Research in Computing Award (2015)

Chosen as Georgia Tech representative for 10th Annual ACC Meeting of the Minds Conference at NC State University

Awarded President's Undergraduate Research Travel Award (PURA) (\$1000, Fall'14)

1st place, 9th Undergraduate Research Kaleidoscope (URK). Oct 2014.

Awarded Sigma Xi Best Undergraduate Research Award (\$200, plaque, certificate, Spring 2014)

2nd Place, 9th Annual Undergraduate Research Symposium at Georgia Tech's College of Computing, Spring 2014

Awarded President's Undergraduate Research Salary Award (PURA) (\$1500, Fall'13)

Funded by Faculty Materials, Supplies and Travel Grants for Undergraduate Research (\$1000, Summer'13)

Awarded to attend the prestigious SC13 (SuperComputing) Experiencing HPC for Undergraduates program. 25 total awardees worldwide.

Samuel Clarke. CS. Co-adv: Hongyuan Zha. Spring 2013 - Fall 2016.

Now: CS Ph.D. student, Stanford

[Astronaut Scholarship \(2015\)](#) -- among the most prestigious scholarships awarding the best and brightest undergraduate students pursuing education in STEM across the nation.

[LatentGesture research featured in popular press](#)

[Wearable Computing Center Grant \(with Nathan Dass\) \(~\\$1000, Fall 2014\)](#)

Premkumar (Prem) Saravanan. CS. Co-adv: Hongyuan Zha. Summer 2013 - Spring 2014.

[Awarded President's Undergraduate Research Salary Award \(PURA\) \(\\$1500, Spring'14\)](#)

[LatentGesture research featured in popular press](#)

[Samarth Agarwal](#). CS. Spring 2013.

[Now: Software Engineer, Google](#)

[Sahil Jolly](#). CS, CMU. 2010.

Sam Wang. CS, CMU. 2006 - 07.

Project: eBay fraud detection

→ [PhD student at MIT](#)

HIGH SCHOOL STUDENTS

Research Advisor [Ergin John \(EJ\) Ozyazgan](#), Walton high school. Spring 2015 - Summer 2015.

VISITING SCHOLARS

[Hugo Armando Gualdron Colmenares](#), visiting from Universidade de São Paulo. Oct 2014 - Mar 2015.

KEYNOTES & INVITED TALKS

[Human-Centered AI: Safe, Interpretable, Trustworthy Analytics](#)

Mar 4, 2024 [Apple](#). Host: Dominik Moritz.

Oct 3, 2023 [Keynote] [GSU Scientific Computing Day](#).

Mar 3, 2023 [As ACM Distinguished Speaker] [California State University, Chico](#). Host: David Zeichick.

Sept 19, 2022 [Carnegie Mellon University CyLab Seminar](#). Host: Prof. Bryan Routledge.

Sept 8, 2022 [Cisco Responsible AI Summit](#). Host: Dr. Ali Payani.

[UniTable: Towards a Unified Table Foundation Model](#)

Mar 8, 2024 [ADP](#). Host: [Xiaojing Wang](#). Presenters: [ShengYun \(Anthony\) Peng](#), [Polo Chau](#)

[Towards Safe and Interpretable AI](#)

Oct 24, 2021 [Keynote] [Visualization in Data Science \(VDS\)](#) at [IEEE VIS 2021](#)

[Interactive Scalable Visualizations for Data Discoveries and Interpretable AI](#)

June 24, 2021 [Keynote] [SIGMOD 2021 Curated Session of Interactive Data Exploration](#). [\[YouTube\]](#)

[Towards Secure and Interpretable AI: Scalable Methods, Interactive Visualizations, and Practical Tools](#)

Aug 23, 2021 [As ACM Distinguished Speaker] [San Francisco Bay ACM Chapter](#). Host: [Greg Makowski](#).

Jul 8, 2021 [Square](#). Host: [Omar Shaikh](#).

May 25, 2021 [American Statistical Association \(ASA\)](#), [Statistical Learning and Data Science](#)

May 14, 2021 [Megagon Labs](#). Host: [Estevam Hruschka](#).

Jan 21, 2021 [PNNL-GT workshop](#)

Jun 4, 2020 [SDSS Symposium on Data Science & Statistics](#)

Dec 6, 2019 [New York University](#). Host: [Enrico Bertini](#)

Nov 15, 2019 [Chick-fil-A](#). Hosts: [Jae Cha](#), [Jon Hadacek](#), [Melinda Borrero](#), [Cameron Bradley](#)

- Nov 6, 2019 IEEE Data Mining Series, Georgia State University
- Aug 29, 2019 [GVU Center Brown Bag Seminar](#), Georgia Tech.
- Aug 13, 2019 [Microsoft Research Talks](#) Series. Hosts: Jay Stoke, Josh Neil. [[YouTube](#)][[Slides](#)]
- Jun 27, 2019 Intel Tech Talk

Secure AI: The Next Frontiers

- Oct 9, 2019 Intel Labs Open House

Adversarial Machine Learning: Perspectives & Recent Developments

- Jul 29, 2019 Intel

Human-centered AI: Scalable Interactive Tools for Interpretation & Attribution

- Jun 11, 2019 [Machine Learning in Science and Engineering \(MLSE\) Symposium](#)
- Apr 23, 2019 Strategic Partnership Program meeting

Explaining Machine Learning Models Using Interactive Visualization

- Mar 14, 2019 NASA Jet Propulsion Lab (JPL). Host: Scott Davidoff

ActiVis: Visual Exploration of Industry-Scale Deep Neural Network Models

- Aug 12, 2018 ACM SIGGRAPH. Delivered by Minsuk Kahng.
- Jun 10, 2018 SIGMOD Workshop on Human-in-the-Loop Data Analytics (HILDA). Delivered by Minsuk Kahng.

Data Mining meeting HCI: Human-Machine Sensemaking of Large Graphs

- Apr 14, 2017 Rutgers University. Host: James Abello
- Apr 7, 2017 Southern Data Science Conference, Atlanta.

Machine Learning meets Visualization: Human-machine Sensemaking of Large Network Data

- Feb 5, 2016 Centers for Disease Control and Prevention (CDC), Atlanta. Host: Robin Wagner.

Data Mining Meets HCI: Interactive Visual Tools for Large Graphs

- Feb 16, 2017 Machine Learning Data Analysis Webinar. South Big Data Hub.
- May 17, 2016 MIT Lincoln Lab Graph Exploitation Symposium 2016
- Jan 29, 2016 Carnegie Mellon University, Human-computer Interaction Institute (HCII) Seminar Series. Host: Brad Myers, Queenie Kravitz

10 Lessons Learned from Working with Tech Companies

- June 21, 2017 [Data Science for Social Good Atlanta 2017](#).
- June 8, 2016 [Data Science for Social Good Atlanta 2016](#).

Data and Visual Analytics 101

- Summer, 2015 Atlanta Data Science for Social Good 2015. Faculty advisor student team. Co-advisors: Bistra Dilkina, Matt Hinds-Aldrich (Atlanta Fire Rescue Department)

Catching Bad Guys with Graph Mining and Visualization

- Dec 17, 2015 Yahoo Labs, New York
- Oct 10, 2015 Emory University Institute for Quantitative Theory and Methods, Data Visualization seminar series
- Mar 9-10, 2015 Machine Learning and Data Analytics Symposium (MLDAS). Doha, Qatar. Host: Dragos Margineantu

Human-in-the-loop Graph Sensemaking: Bridging HCI and Data Mining

- Dec 12, 2014 [NIPS 2014 Workshop on Personalization: Methods and Applications](#)

HCI meets Data Mining: Interactive Graph Visualization, Exploration, and Sensemaking

- Jun 12, 2016 Computer Society International Conference on Computers, Software & Applications (COMPSAC) 2016

Interactive Graph Visualization, Exploration, and Sensemaking

Dec 10, 2014 FLAMEL workshop

Scalable, Interactive Tools for Large Graph Analytics

Oct 27, 2014 [Keynote] [Scalable Machine Learning: Theory and Applications](#) workshop at [IEEE International Conference on Big Data \(IEEE BigData 2014\)](#)

Oct 2, 2014 [Keynote] Undergraduate Research Kaleidoscope. Jointly hosted by Georgia Tech Library and the Undergraduate Research Opportunities Program.

Data Mining Meets HCI: Scalable, Interactive and Comprehensible Tools for Data Analytics

Nov 18, 2015 Career Builder [Distinguished Speaker Series](#). Host: Khalifeh Al Jadda

Oct 17, 2015 Northwestern University, SONIC Speaker Series. Host: Noshir Contractor

Feb 13, 2015 Twitter. Host: Shuang Yang.

Jun 24, 2014 PARC (Palo Alto Research Center Incorporated). Hosts: Oliver Brdiczka, David Gunning.

Jun 6, 2014 Search Technology Forum, eBay.

Apr 26, 2014 2014 SIAM Data Mining (SDM) Workshop on Exploratory Data Analysis.

Mar 13, 2014 [Data Science ATL](#). Host: [Dr. Raj Bandyopadhyay](#). [SOLD-OUT! 200 attendees. 5-star reviews.](#)

Jan 16, 2014 Big Data Chalk & Talk/Brown Bag. Georgia Tech.

Data Mining Meets HCI: Scalable, Interactive Tools for Large Graphs

Nov 5, 2013 Rutgers University. Host: [Prof. Tina Eliassi-Rad](#).

Nov 4, 2013 Bell Labs. Host: [Chun-Nam \(John\) Yu](#).

Data Mining Meets HCI: Making Sense of Large Graphs

Jun 28, 2013 Goodreads. Host: [Jeff Wong](#).

Mar 15, 2013 Stanford HCI seminar. Host: Prof. Jeff Heer.

Feb 11, 2013 LogicBlox. Host: Nikolaos (Nick) Vasiloglou II.

Nov 28, 2012 UC Berkeley iSchool Dean's Lecture. Host: [Prof. Marti Hearst](#)

Oct 25, 2012 LinkedIn. Host: Dr. Daniel Tunkelang, Dr. Monica Rogati

Sept 26, 2012 Hong Kong University, School of Business. Host: Prof. Michael Chau

Oct 11, 2012 IBM (T.J. Watson Research Center). Host: Dr. Hanghang Tong.

June 11, 2012 Huawei Noah Ark Research Lab, Hong Kong. Host: Prof. Qiang Yang.

May 28, 2012 Hong Kong University of Science and Technology. Host: Lionel Li

Apr 16, 2012 University of Pittsburgh, School of Information. Pittsburgh, PA, USA. Host: Prof. Peter Brusilovsky.

Apr 6, 2012 Georgia Tech, School of Computational Science & Engineering. Atlanta, Georgia, USA.

Apr 2, 2012 Virginia Tech, Computer Science Department. Blacksburg, Virginia, USA.

Mar 26, 2012 University of Rochester, Computer Science Department. Rochester, New York, USA.

Mar 20, 2012 Stony Brook University, Computer Science Department. Stony Brook, New York, USA.

Mar 13, 2012 Brown University, Computer Science Department. Providence, Rhode Island, USA.

Mar 7, 2012 University of Michigan, School of Information. Ann Arbor, Michigan, USA.

Feb 27, 2012 Pennsylvania State University, College of Information Sciences and Technology. State College, Pennsylvania, USA.

Feb 24, 2012 Carnegie Mellon University, Tepper School of Business. Pittsburgh, Pennsylvania, USA.

Exploiting Network Effects for Fraud and Malware Detection

Aug 2, 2013 The Third EITA Young Investigator Conference (EITA-YIC 2013), MIT. Invited

Large Graph Analytics: Anomaly Detection & Visualization

Mar 24, 2013 SIAM SEAS mini symposium on Anomaly Detection Methods and Applications. Invited by Dr. Blair Sullivan, Dr. Robert Bridges.

June 4, 2012 Singapore Management University. Host: Kyriakos Mouratidis

Mining Billion-Node Graphs: Ideas & Tools

May 28, 2012 Carnegie Mellon University, Tepper School of Business. Pittsburgh, Pennsylvania, USA. Invited.

Mining Massive Graphs: Visualization and Anomaly Detection

May 13, 2011 Google. Mountain View, CA, USA

May 10, 2011 Simon Fraser University. Vancouver, Canada. Host: Prof. Jian Pei. Invited.

Detecting Fraudulent Personalities in Networks of Online Auctioneers

Feb 16, 2007 eBay. Palo Alto, CA, USA. Invited.

PROFESSIONAL RECOGNITION

Since Jun, 2020 **ACM Distinguished Speaker**

Invited Panelist

Oct 26, 2023 IEEE VIS'23 panel: How should VIS4ML Redefine Itself in the Rapid Evolution of AI?

Sept 8, 2022 Cisco Responsible AI Summit

Jul 25, 2022 **Vis for AI: How can Vis help build better AI models?** panel at **Opportunities between AI and Visualization** workshop. Host: Prof. Enrico Bertini, Northeastern University.

Nov 11, 2021 **Explainable vs. Ethical AI: Just Semantics?** Panel, 2021 CATT Global Analytics Summit on Explainable AI (XAI), University of Texas

May 5, 2021 TAG Data Science & Analytics Explainable AI

Nov 10, 2020 IDEAs panel on **Getting Started in Data Science and Machine Learning** (panelist), Georgia Tech

May 27, 2020 Education panel on **Visualization for Data Science** (panelist), **Eurographis & EuroVis 2020**

Apr 7, 2020 Keep Teaching: Advice from Thank a(n Online) Teacher Recipients

Dec 12, 2019 **Ask A Prof! inaugural blog post** of *On Teaching and Learning @ Georgia Tech*

Jul 9, 2019 **Undergraduate Research Faculty Panel** (panelist), Georgia Tech

Jun 10, 2018 SIGMOD 2018 Workshop on **Human-In-the-Loop Data Analytics (HILDA)**.

Mar 4, 2016 **FLAMEL** (NSF IGERT) Workshop.

Feb 5, 2016 *Seeing for Action - Using Maps and Graphs to Protect the Public's Health*. Centers for Disease and Prevention (CDC). Host: Robin Wagner.

Sept 22, 2015 Technology Association of Georgia (TAG) Big Data Panel on *Topic: What are we teaching in Big Data in our universities?*

Oct 16, 2013 IEEE Vis'2013 Workshop on *Using Visual Analytics to Foster Lateral Thinking About Business Problems*. Host: Chandan Gokhale (Infosys)

Apr 30, 2013 PACE Town Hall panel, on HPC, visualization

Dec 11, 2012 SAMSI-FODAVA Workshop on *Interactive Visualization and Analysis of Massive Data*

Nov 13, 2012 *Big Data Meets Social Media* at Georgia Tech's *Institute for People and Technology (iPaT)*'s annual *People & Technology Forum*

Invited Panel Chair

Oct 31, 2023 Science in the Age of Generative AI, ORNL Core Universities AI Workshop 2023

Mar 21, 2015 Georgia Tech Business Analytics and Big Data Forum: Visual Analytics Session, with Rahul Basole

Apr 15, 2013 Center for Data Analytics workshop, Georgia Tech

Invited Participant

Jun 14-15, 2017 Pacific Northwest National Laboratory (PNNL) Faculty Summit
Theme: Machine Learning and Human Computer Interaction for Science and Security

Feb 15, 2017 Forum on Synthetic Identity Fraud, National Academies of Sciences

Jul 13-14, 2016 Microsoft Faculty Summit

Aug 1-2, 2016 Google Faculty Institute

Jun 17-18, 2014 Pacific Northwest National Laboratory (PNNL) Analysis in Motion (AIM) Workshop

GRANTS & FUNDING

Object Sensing and Cognition for Adversarial Robustness

[DARPA Guaranteeing AI Robustness Against Deception \(GARD\)](#). Agreement number HR00112030001

Prime PI: Jason Martin (Intel)

Georgia Tech PI: Duen Horng (Polo) Chau

Georgia Tech amount: \$1.3 million

Period: 1/28/2020 – 2/29/2024

[News Release](#)

Research Initiation: Developing Technical Identity of Construction Engineering Students with Mixed Reality

NSF 2306226

PI: Omobolanle Ogunseiju

Co-PI: Duen Horng (Polo) Chau

Amount: \$199,997

Period: 8/1/2023 – 7/31/2025

Collaborative Research: IRES Track I: Artificial Intelligence and Human Designer - Research Experience in Singapore (AIHD Singapore)

NSF 2246298

PI: Baabak Ashuri

Co-PI: Duen Horng (Polo) Chau

Amount: \$150,000

Period: 9/1/2023 – 8/26/2026

Updating the GDOT's Risk-based Programmed Contingencies Through Development of a Data-Driven Decision Tree Model

Georgia Department of Transportation (GDOT)

PI: Baabak Ashuri

Co-PI: Duen Horng (Polo) Chau

Amount: \$300,000

Period: 1/31/2024 – 5/1/2026

SitS NSF-UKRI: Rapid Deployment of Multi-Functional Modular Sensing Systems in the Soil

NSF 1935548

PI: Chloé Arson

Co-PIs: David Frost, Daniel Goldman, Duen Horng (Polo) Chau, Frank Hammond

Amount: \$1.7 million (with Imperial College London via UK Research and Innovation); Georgia Tech amount: \$800,000

Period: 9/1/2019 – 8/31/2024

[News Release](#)

SPARC-X: Quantum simulations at extreme scale - reactive dynamics from first principles

DE-SC0019410

PI: Phanish Suryanarayana

Co-PI: Andrew J. Medford, Edmond Chow, John E. Pask (Lawrence Livermore National Laboratory)

Senior Personnel: Duen Horng (Polo) Chau

Amount: \$2.8 million

Period: 09/15/2018 - 09/14/2024

[News release](#)

ADP-GT Research

ADP

PI: Polo Chau

Co-PIs: Chao Zhang, Srijan Kumar

Amount: \$250,000

Period: 10/5/2022 – 12/31/2023

Interactive Scalable Interpretable Monitoring of AI Training

Cisco Systems

PI: Polo Chau

Amount: \$150,000

Period: 10/3/2022 – 12/2/2023

Interactive Scalable Auditing of AI Biases with Interpretable Mitigation

Cisco Systems

PI: Judy Hoffman

Co-PI: Duen Horng (Polo) Chau

Amount: \$307,514

Period: 10/1/2020 – 8/31/2022

Analyzing and using large pretrained language models for societal good

Microsoft
 PI: Munmun De Choudhury
 Co-PI: Alan Ritter, Diyi Yang, Polo Chau
 Amount: \$300k Microsoft Azure credit
 Period: 2/1/2021 – 6/1/2021

SaTC: CORE: Medium: Understanding and Fortifying Machine Learning Based Security Analytics
 NSF CNS 1704701

PI: Polo Chau
 Co-PIs: Taesoo Kim, Wenke Lee, Le Song
 Amount: \$1.2 million
 Period: 8/1/2017 – 7/31/2021

Understanding Deep Neural Networks Through Attribution and Interactive Experimentation

NASA
 PI: Polo Chau
 Amount: \$235,000
 Period: 8/1/2018 - 12/31/2020

III: Medium: Collaborative Research: Human-computer Graph Exploration and Tele-discovery
 NSF IIS 1563816 (& 1563971)

PIs: Polo Chau, James Abello
 Amount: \$1.2 million
 Period: 8/1/2016 – 7/31/2020

Intel Science & Technology Center for Adversary-Resilient Security Analytics (ISTC-ARSA)

Intel
 PI: Wenke Lee
 Co-PIs: Polo Chau, Taesoo Kim, Le Song
 Gift: \$1.5 million
 7/27/2016 – 6/30/2019

Center of Excellence for Mobile Sensor Data-to-Knowledge (MD2K)

National Institute of Health (NIH: 1-U54EB020404-01)
 Amount: \$10.8 million (Prime: Univ. of Memphis); Georgia Tech amount: \$1,250,035
 PI: Jim Rehg
 Co-PIs: Gregory Abowd, Polo Chau
 Period: 9/29/2014 – 09/30/2018

TWC: Small: Collaborative: Cracking Down Online Deception Ecosystems

NSF TWC 1526254
 PIs: Bogdan Carbutar, Duen Horng (Polo) Chau
 Amount: \$499,413
 Period: 9/1/2015 – 8/31/2018

EAGER: Scaling up Machine Learning with Virtual Memory

NSF IIS 1551614
 PIs: Polo Chau, Rich Vuduc
 Amount: \$184,904
 Period: 10/1/2015 – 9/30/2017

Scalable Architecture for Anomaly Visualization in Power Generating Assets

Strategic Energy Institute (SEI), Georgia Tech
 PI: Polo Chau
 Amount: \$52,344
 Period: 1/1/2016 - 12/31/2017

Data Science Platform for Strategic Industry Partnerships, Innovations, & Talent Development

Institute for Data Engineering and Science (IDEaS), Georgia Tech
 PI: Polo Chau
 Co-PIs: Le Song, Hongyuan Zha, Sridhar Narasimhan, Jeffrey Hu, John Stasko, Cherry Liu
 Amount: \$75,000
 Period: 1/1/2016 - 6/30/2016

CGV: Small: Making Sense out of Large Graphs - Bridging HCI with Data Mining

NSF IIS-1217559
 PI: Christos Faloutsos
 Co-PI Duen Horng Chau, Aniket Kittur
 Amount: \$528,578.00
 Period: 8/25/2012 - 8/31/2015

Identifying Risks to Psychological Distress in University Student Populations from Online Interaction Data

James Edenfield Faculty Fellowship, with Munmun De Choudhury (IC). One graduate student support for one academic year, co-advised by two College of Computing faculty.

Amount: ~\$25k

Period: Fall 2015 - Spring 2016

Illuminating Paths to Success: Mining Common Sequences of Courses

Georgia Tech Professional Education

PI: Polo Chau

Amount: \$18,625

Period: 5/11/2015 - 8/1/2015

Data-Driven Decision-Making via Visual Analytics on the Microsoft Surface Hub

Microsoft

PI: John Stasko

Co-PIs: Rahul Basole, Alex Endert, Polo Chau

Amount: \$25,000 and received an 84-inch Surface Hub.

Reimagining Humanities Visualization: A Research-Through-Design Workshop for Civic and Cultural Data

GVU research and engagement grant

PI: Lauren Klein

Co-PIs: Rahul Basole, Polo Chau, Carl DiSalvo, Alex Endert, Jim Foley, Nassim JafariNaimi, Yanni Loukissas, John Stasko, Jimeng Sun

Discovery, Analysis, & Visualization of Pediatric Asthma Careflow

Children's Healthcare of Atlanta

PI: Rahul Basole

Co-PIs: Mark Braunstein, Nicoleta Serban, Duen Horng Chau Amount: \$202,867

Period: 9/1/2014 - 8/31/2015

Proactive Detection of Insider Threats with Graph Analysis at Multiple Scales

PIs: T. Senator (SAIC) and D.A. Bader (GTRI)

Defense Advanced Research Projects Agency

Anomaly Detection at Multiple Scales (ADAMS) Program

Amount: \$2,927,976 (GT portion)

Period: 5/1/2011 - 4/30/2013

Discovery, Analysis, and Visualization of Pediatric Careflow Processes

Raytheon Faculty Fellowship, with [Rahul Basole](#) (IC). One graduate student support for one academic year, co-advised by two College of Computing faculty. Amount: ~\$25k

Period: Fall 2014 - Spring 2015

Gift Avast Software. \$100,000. Aug, 2021.

Fiddler Labs. \$80,000. Aug, 2021.

Bosch. \$37,000. Jan, 2021.

NVIDIA. DGX A100 640GB (~\$200,000) + \$79,000. Nov, 2020.

NVIDIA. Donation of a Titan V GPU. 2018.

Google Faculty Research Award. 2015. \$52,000.

[200 server donation from Yahoo Labs](#), as part of Yahoo Servers to Academic Researchers program (Y-STAR). Thanks [Seth Tropper!](#)

Intel. Spring 2015. \$40,000. Support for big data curriculum.

LogicBlox. Fall 2013 - Spring 2014: \$12,500.

Symantec. Summer 2013: \$10,000. April 2014: \$26,000. Spring 2015: \$40,000.

eBay. Summer 2014: \$15,000.

Yahoo Faculty Research Engagement (FREPE) award. 2014 - 2015: \$10,000.

Yahoo sponsoring student seminars and distinguished lectures. 2014 - 2015: \$13,500.

Georgia Tech Wearable Computing Center Mentorship Grant. \$1000, Fall 2014. Advising undergraduate students Samuel Clarke and Nathan Dass

MS&T Faculty Materials, Supplies and Travel Grants for Undergraduate Research, advising Mr. Dezhi (Andy) Fang and Nathan Dass. Awarded: \$1000, summer 2017

Faculty Materials, Supplies and Travel Grants for Undergraduate Research, advising Mr. Yiqi (Victor) Chen. Awarded: \$800, summer 2014

Faculty Materials, Supplies and Travel Grants for Undergraduate Research, advising Mr. Zhiyuan (Jerry) Lin. Awarded: \$1000, summer

2013

- Fellowship Research proposals led to two full years of research funding from Symantec. Awarded:\$140,000.
- Co-author \$35 million DARPA proposal on *Anomaly Detection at Multiple Scales* (ADAMS). CMU funded ~\$500,000. Co-authored the winning proposal, represented CMU and led research efforts.
- Education Grant **Microsoft Azure Grant**
 - 2016 - 2017 \$20,000 for CSE 6242 / CX 4242 Data and Visual Analytics
 - Amazon Web Services (AWS) Machine Learning Grant**
 - Fall 18 \$5000 credits for distributed machine learning research
 - Spring 15 \$2500 credits for distributed machine learning research
 - Amazon Web Services (AWS) Teaching Grant**
 - Spring 2015 \$12000 credits for CSE 6242 / CX 4242 Data and Visual Analytics
 - Fall 2014 \$14000 credits for CSE 6242 / CX 4242 Data and Visual Analytics
 - Spring 2014 \$10000 credits for CSE 6242 / CX 4242 Data and Visual Analytics
 - Spring 2013 \$4000 credits to CSE 6242 A / CS 4803 DVA Data and Visual Analytics
 - Unfunded Helped in creating an NEC proposal for *University Awards from NEC Labs Data Management*. \$75,000

PROFESSIONAL ACTIVITIES

- Program Co-chair ACM Intelligent User Interfaces Conference (IUI) 2019
USENIX Security and AI Networking Conference (ScAI.Net) 2019
- General Co-Chair [ACM Intelligent User Interfaces Conference \(IUI\) 2015](#)
- Workshop Co-Chair VIS workshop on [Visualization for AI Explainability \(VISXAI\)](#) 2018, 2019, 2020
KDD workshop on **Interactive Data Exploration and Analytics (IDEA)**: [2013](#), [2014](#), [2015](#), [2016](#), [2017](#), [2018](#)
ICML workshop on Visualization for Deep Learning: 2016, 2017
- Co-Organizer Dagstuhl Seminar on **Interactive Visualization for Fostering Trust in ML**. Organizers: Daniela Oelke, Alex Endert, Daniel A. Keim, Polo Chau. Aug 28 – Sept 2, 2022.
- Steering Committee IEEE VIS workshop on [Visualization for AI Explainability \(VISXAI\)](#). 2021, 2022.
[ACM Intelligent User Interfaces \(IUI\) Conference](#). Since 2016.
ICLR 2021 workshop on [Beyond static papers: Rethinking how we share scientific understanding in ML](#)
[USENIX Security and AI Networking Conference \(ScAI.Net\) 2019](#)
- Associate Editor IEEE Transactions on Visualization and Computer Graphics (TVCG). 2020 - 2022.
ACM Transactions on Interactive Intelligent Systems (TIIS). 2020 - 2021.
- Publicity Chair [ACM WSDM Conference Series Web Search and Data Mining \(WSDM\) 2016](#)
[ACM SIGKDD Conference on Knowledge Discovery and Data Mining \(KDD\) 2014](#)
[IEEE International Conference on Data Mining \(ICDM\) 2014](#)
- Advisory Board [Southern Data Science Conference 2017](#)
- Journal Co-editor ACM TKDD Special Issue on Interactive Data Exploration and Analytics (IDEA), 2015
- NSF Review Panelist Information and Intelligent Systems (IIS) Division. 2014, 2015, 2016, 2018, 2019
Secure and Trustworthy Cyberspace (SaTC). 2018
(CISE) Research Initiation Initiative (CRII). 2016.
- Conf Area Chair ECML-PKDD 2020 (Research Track), 2022, 2023
- Session Chair VIS 2020
SDM 2017: Classification
KDD 2015: Social Good
KDD 2014: Scaling-up Graph Algorithms

- Conf Associate Chair [CHI 2018 \(Engineering Interactive Systems and Technologies\)](#)
[AVI 2014](#)
- Conf Senior Program Committee PKDD 2020-22
SIAM SDM 2019-23
ACM IUI 2019-21
- Conf Program Committee IEEE VIS 2018-2023
KDD 2013-2020
SDM 2014-2020 (SIAM International Conference on Data Mining)
ICDCS 2017
[WSDM 2015](#), WSDM 2016
ACM IUI 2016
ECML/PKDD 2013-2019
ASONAM 2015
[SC14](#) (SuperComputing 2014) - Data Analytics, Visualization and Storage
[Chinese CHI 2014](#)
- Workshop Program Committee KDD 2019 Workshop on [Learning and Mining for Cybersecurity \(LEMINGS\)](#)
IEEE VIS 2017 Workshop on [Visualization in Data Science \(VDS\)](#)
[IEEE VIS 2015 Workshop on Exploring Graphs at Scale \(IEEE EGAS\)](#)
WWW 2015 Workshop on [Diffusion, Activity and Events in Networks: Models, Methods & Applications](#)
WWW 2015 Workshop on [Modeling Social Media - Behavioral Analytics in Social Media, Big Data and the Web](#)
[IEEE International Conference on Data Mining \(ICDM 2014\)](#) workshop on [Scalable Machine Learning: Theory and Applications](#)
[IEEE International Conference on Big Data \(IEEE BigData 2014\)](#) workshop on [Scalable Machine Learning: Theory and Applications](#)
[Reliability and Security Data Analysis \(RSDA 2014\)](#)
ICDM workshop on [Scalable Data Analytics: Theory and Applications](#)
WWW 2014 workshop on Mining Big Data in Social Media and the Web (MSM)
ACM SAC 2014 (Symposium On Applied Computing)
KDD 2013 workshop on **Outlier Detection and Description (ODD)**
KDD 2014 workshop on **Outlier Detection & Description under Data Diversity (ODD²)**
ICDM 2012 (Demo Session)
ECML PKDD 2012 Workshop on **Instant Interactive Data Mining**
NIPS 2011 workshop on parallel and large-scale machine learning (**Big Learning**)
CSCW 2012 workshop on **Personal Information Management (PIM)**
ASIST 2009 workshop on **Personal Information Management (PIM)**
- Symposium Org. **The First Student Research Symposium**. CMU/Machine Learning Department. 2009.
- Journal Reviewer TOCHI, 2015
IEEE's Transactions on Knowledge and Data Engineering (TKDE), 2014
ACM Computing Surveys, 2014
Statistical Analysis and Data Mining journal Special Issue of "Best of SDM 2014"
International Journal on Human-Computer Interaction (2014)
Data & Knowledge Engineering (DKE) Journal (2013)
IEEE Journal of Biomedical and Health Informatics (2013)
Software: Practice and Experience (2013)
IEEE Intelligent Systems (2012)
Parallel Computing (2011)

- IBM Systems Journal (2007)
- Conference Reviewer
 - SDM 2014-17
 - KDD 2013-17
 - ECML/PKDD 2008-09, 2013, 2015-17
 - ICDM 2012
 - WSDM 2015-16
 - WWW 2008-10
 - IEEE BigData 2014
 - IEEE Vis 2017
 - CHI 2007-16
 - UIST 2007-10, 2014
 - IUI 2012-16
 - AVI 2014
 - SuperComputing (SC) 2014
 - NIPS 2013
 - VLDB 2008-09
 - HICSS 2013
 - International Cross Domain Conference and Workshop (CD-ARES 2013)
- Seminar Organizer
 - Machine Learning Lunch Seminar.** CMU/Machine Learning Department. 2008-2011.
 - CSE Seminar Co-organizer. GT/CSE. 2012–2013 AY.
- Member
 - Association for Computing Machinery (ACM). Since 2006.
 - The Institute of Electrical and Electronics Engineers (IEEE). Since 2006.
 - HCIC (Human Computer Interaction Consortium)
 - Machine Learning Department (CMU) website committee

SERVICES AT GEORGIA TECH

- Institute
 - Georgia Tech Vice President for Commercialization & Chief Commercialization Officer (CCO) Search Committee, 2021.
 - Georgia Tech's Strategic Planning Steering Committee, Oct 2019 - May 2020.
 - Director of Industry Relations, The Institute for Data Engineering and Science. Since Oct 2019.
 - Associate Director of Corporate Relations, The Center for Machine Learning. Since Oct 2019.
 - Provost learning and teaching fellow. 2018-2022 AY
 - Associate Director, [Masters of Science in Analytics](#). Since 8/2014.
 - Machine Learning Faculty Advisory Committee. Since May 2017.
 - Academic Faculty Senate Representative for CSE, 2015-2018 AY
 - Institute for Information Security & Privacy (IISP) faculty council member. Since 6/2015
 - Strategic Energy Institute (SEI) Faculty Advisory Council (FAC) member. July 2018 - Oct 2021.
 - Strategic Energy Institute (SEI) faculty member
 - Institute for Data Engineering and Science (IDEaS) faculty member
 - Center for Machine Learning (ML@GT) faculty member
- College of Computing
 - Faculty Advisory Board for Communications. 2022- AY.
 - Machine Learning Area Leader. 2018-2021 AY.
 - Advisory board member of GT DataWorks, a new data literacy program to broaden participating in data science. Sep 2019 - Dec 2020.
- CSE
 - Chair, Faculty Recruiting Committee, 2023- AY

School Web Committee (Co-Chair with Bryant Wine), 2022-2023 AY
 School Web Committee (Co-Chair with Kristen Perez), 2020–2021 AY
 School Honors Committee, 2019–2020 AY, 2020–2021 AY, 2021–2022 AY
 School Reappointment, Promotion, and/or Tenure (RPT) Committee, since 2018–2019 AY
 School Advisory Committee (SAC), 2013-2014 AY, 2014-2015 AY, 2015–2016 AY, 2016–2017 AY
 Graduate Admissions Committee (CS, CSE programs), 2012–2013, 2013–2014 AY (Chair of CSE), 2015–2016 AY, 2017–2018 AY, 2018–2019 AY
 PhD Recruiting Committee (Chair of CSE), 2012–2013 AY, 2013–2014 AY
 CSE Chair Search Committee Member, 2012–2013 AY, 2019-2020 AY
 CSE Seminar Co-organizer, 2012–2013 AY
 Space Planning Committee, 2012–2013 AY
 Created *State of CSE* info graphics

IC + CSE Visual Analytics area coordinator (with Alex Endert of IC), MS CS, 2014-2017

Student Club Faculty advisor, Data Science @ Georgia Tech (DSGT), a data science club for Georgia Tech students.

PhD Thesis Gaurav Verma. GT/CS. Adv: Srijan Kumar. Proposal: 05/02/24. Defense: MM/DD/YY.
 Mingshu Li. GT/CEE Adv: Baabak Ashuri. Proposal: 03/29/24. Defense: MM/DD/YY.
 Wenxin Zhang. GT/AE. Adv: Dimitri Mavris. Proposal: 04/01/24. Defense: MM/DD/YY.
 Jacob Logas. GT/Computer Interaction. Adv: Rosa Arriaga, Sauvik Das. Proposal: 12/01/23. Defense: MM/DD/YY.
 Kaan Sancak. GT/CSE. Adv: Umit Ümit V. Çatalyürek. Proposal: 11/21/23. Defense: MM/DD/YY.
 Zoe Klesmith. GT/CSE-MechE. Adv: Christopher Saldana. Proposal: 12/11/23. Defense: MM/DD/YY.
 Yue Yu. GT/CSE. Adv: Chao Zhang. Proposal: 12/03/23. Defense: MM/DD/YY.
 Dongjin Choi. GT/CSE. Adv: Haesun Park. Proposal: 11/10/23. Defense: MM/DD/YY.
 Hyungu Choi, GT/CSE-AE. Adv: Dimitri Mavris. Proposal: 06/27/23.
 Qinghai Zhou. UIUC. Adv: Hanghang Tong. Proposal: 05/02/23. Defense: 08/28/23.
 Irfan Al-Hussaini, GT/ECE. Adv: Cassie Mitchell. Co-Adv: Justin Romberg. Defense: 06/27/23.
 Arpit Narechania, GT/CS. Adv: Alex Endert. Proposal: 12/07/22.
 Danrong Zhang, GT/CSE-CEE. Adv: David Frost. Proposal: 12/01/22.
 Caleb Harris. GT/CSE-AE. Adv: Dimitri Mavris. Proposal: 12/09/21. Defense: 09/23/22.
 Rodrigo Borela. GT/CSE-CEE. Adv: David Frost. Defense: 11/29/21.
 Sooji (Susie) Ha. GT/CSE-CEE. Adv: Emily Grubert, Omar Asensio. Proposal: 01/19/2021.
 Shahrokh (Shah) Shahi. GT/CSE. Adv: Elizabeth Cherry. Proposal: 12/16/20. Defense: 07/22/22.
 Luis Fernando Patino Ramirez. GT/CEE. Adv: Chloé Arson. Defense: 10/29/20.
 Majid Ahadi Dolatsara. GT/ECE. Adv: Madhavan Swaminathan. Defense: 01/27/21.
 Aroua Gharbi. GT/AE. Adv: Dimitri Mavris. Proposal: 12/15/20. Defense: 04/14/22.
 Rodrigo Borela Valente. GT/CSE-CEE. Adv: David Frost. Defense: 11/29/2021
 Junghyun (Andy) Kim. GT/CSE-AE. Adv: Dimitri Mavris. Proposal: 04/06/20. Defense: 03/29/21.
 Hanjun Dai. GT/CSE. Adv: Le Song. Proposal: 7/10/19. Defense: 12/3/19.
 Po Ming (Terrance) Law. GT/CS. Adv: Alex Endert, John Stasko. Proposal: 05/04/20. Defense: 04/10/21.
 Karl Gemayel. GT/CSE. Adv: Mark Borodovsky. Proposal: 12/27/19. Defense: 10/26/20.
 Weiyang Liu. GT/CSE. Adv: Le Song. Proposal: 10/11/19. Defense: 07/15/20.
 Rakshit Trivedi. GT/CSE. Adv: Rakshit Trivedi. Proposal: 10/3/19. Defense: 06/25/20.
 Yuzhi Guo. GT/CSE. Adv: David Frost. Proposal: 12/26/19. Defense: 05/07/20.
 Julia Deeb-Swihart. GT/CS. Adv: Amy Bruckman, Alex Endert. Proposal: 10/30/19. Defense: 05/26/22.
 Amrita Gupta. GT/CSE. Adv: Bistra Dilkina. Proposal: 12/17/19. Defense: 01/05/2021.

Hang Wu. GT/ML. Adv: May Wang. Proposal: 12/12/19.

Xiangyun (Ray) Lei. GT/Chem Eng . Adv: AJ Meford. Proposal: 11/30/18. Defense: 06/28/21.

Hanna Kim. GT/CSE. Adv: Haesun Park. Proposal: 8/27/19. Defense: 11/18/20.

Payam Siyari. GT/CS. Adv: Konstantinos Dovrolis. Proposal: 4/25/18. Defense: 10/17/18.

Leilei Xiong. GT/ECE. Adv: Santiago Grijalva. Defense: 12/14/18.

Xiaochen Zhang. GT/ECE. Adv: Santiago Grijalva. Defense: 7/24/17.

Ahmet Cecen. GT/CSE. Adv: Surya Kalidindi. Proposal: 2/1/17. Defense: 7/20/17

Mengmeng (Helen) Liu. GT/CSE. Adv: David Frost. Proposal: 4/18/17. Defense: 8/14/17.

Young Jin Kim. GT/CSE. Adv: Dimitri Mavris. Co-adv: Richard Fujimoto. Proposal: 2/9/17. Defense: 7/28/17.

Youngchul Park. GT/CSE. Adv: Dimitri Mavris. Proposal: 11/18/16.

Hillool Sarker. Univ. of Memphis/CS. Adv: Santosh Kumar. Proposal: 4/8/16. Defense: 11/4/16.

James Fairbanks. GT/CSE. Adv: David Bader. Defense: 3/28/16.

Kunal Malhotra. GT/CS. Adv: Sham Navathe. Co-adv: Jimeng Sun. Proposal: 12/8/15. Defense: 11/7/16.

Ramakrishnan (Ramki) Kannan. GT/CS. Adv: Haesun Park. Proposal: 5/5/15. Defense: 2/22/16.

Joonseok Lee. GT/CSE. Adv: Guy Lebanon, Hongyuan Zha. Defense: 2/19/15.

Long Tran. GT/CSE. Adv: Hongyuan Zha, Alex Gray. Proposal: 9/10/14. Defense: 1/6/15, GT/CSE

Saeideh Bakhshi, GT/IC. Adv: Eric Gilbert. Defense: 7/1/14

Da Kuang, GT/CSE. Adv: Haesun Park. Defense: 6/12/14

Albert Brzezczko, GT/ECE. Adv: John Copeland. Defense: 4/2/14

Liangda Li, GT/CSE. Adv: Hongyuan Zha. Proposal: 4/9/2014. Defense: 4/22/15

Mengdie Hu. GT/IC. Adv: John Stasko. Proposal: 12/11/13. Defense: 4/5/17

Zhaoming Yin. GT/CSE. Adv: David Bader. Proposal: 4/26/2013.

Oded Green. GT/CSE. Adv: David Bader. Proposal: 3/26/2013. Defense: 3/14/2014.

Ke Zhou. GT/CSE. Adv: Hongyuan Zha. Proposal: 1/24/2013. Defense: 8/6/13

Soumitry Ray. GT/Civil Eng. Adv: Jochen Teizer. Proposal: 11/21/2012. Defense: 3/24/2014

PhD Qualifying Exam Rijul Magu. GT/CS. Advs: Amy Bruckman, Diyi Yang. 04/26/24

Mohit Chandra. GT/CS. Adv: Munmun De Choudhury. 04/15/24

Anthony Peng. GT/CS. Adv: Polo Chau. 12/06/23

Ben Hoover, GT/ML-CSE. Adv: Polo Chau. 04/11/23

Seongmin Lee, GT/CS-CSE. Adv: Polo Chau. 04/17/23

Michael Buzzy, GT/CSE-ME. Adv: Surya Kalidindi. 04/27/23

Grayson Harrington, GT/CSE-ME. Adv: Surya Kalidindi. 04/26/23

Zoe Klesmith, GT/CSE-ME. Adv: Christopher Saldana. 12/13/22

Johnie Sublett. GT/CSE-AE. Adv: Dimitri Mavris. 06/24/22

Yu Fu. GT/HCC. Adv: John Stasko. 04/15/22

Adam Coscia. GT/HCC. Adv: Alex Endert. 04/11/22

Takahiro Furuya, GT/CSE-CEE. Adv: Aris P. Georgakakos. 12/10/21

Ruijia Wang, GT/CSE-CEE. Adv: David Frost. 12/06/21

Fernando Vasconcelos Da Senhora. GT/CSE-CSS. Adv: Glaucio Paulino. 11/19/21

Danrong Zhang, GT/CSE-CEE. Adv: David Frost. 11/12/21

Arpit Ajay Narechania. GT/IC. Adv: Alex Endert. 05/16/21

Austin Wright. GT/ML. Adv: Polo Chau. 04/21/21

Zijie (Jay) Wang. GT/ML. Adv: Polo Chau. 04/21/21

Caleb Harris. GT/CSE-AE. Adv: Dimitri Mavris. 04/05/21

Shenyu Xu. GT/IC. Adv: Alex Endert. 04/19/22
Yue Yu. GT/CSE. Adv: Chao Zhang. 12/08/20
Arpit Ajay Narechania. GT/IC. Adv: Alex Endert
Yujin Yang. GT/ML. Adv: Negar Kiyavash. 11/06/20
Hayeong Song. GT/IC. Adv: John Stasko. 04/20/20
Dongjin Choi. GT/CSE. Adv: Haesun Park. 04/22/20
James Pagan. GT/CSE. Adv: Dimitri Mavris. 12/12/19
Rodrigo Borela. GT/CSE. Adv: David Frost. 11/06/2020
Ali Siahkoohi. GT/CSE. Adv: Felix Herrmann. 11/13/19
Junghyun (Andy) Kim. GT/CSE. Adv: Dimitri Mavris. 12/12/19
Weiyang Liu. GT/CSE. Adv: Le Song. 10/11/19
Rakshit Trivedi. GT/CSE. Adv: Hongyuan Zha. 11/9/19
Xiaojing (Jing) An. GT/CSE. Adv: David Bader. 10/16/18
Sarmistha Dutta. GT/CS. Adv: Munmun De Choudhury. 4/13/18
Subhajit Das. GT/CS. Adv: Alex Endert. 4/8/19
Apaar Shanker. GT/CSE. Adv: Surya Kalidindi. 5/4/19
Po Ming (Terrance) Law. GT/CS. Adv: Rahul Basole. 3/31/19
Yuzhi Guo. GT/CSE. Adv: David Frost. 3/12/18
Srinivas Eswar. GT/CSE. Adv: Rich Vuduc, Haesun Park. 1/26/18
Hanjun Dai. GT/CSE. Adv: Le Song. 1/25/18
Harsh Shrivastava. GT/ML. Adv: Srinivas Aluru. 5/2/18
David Betancourt. GT/CSE. Adv: Rafi Muhanna. 11/12/19
Siddharth Biswal. GT/CSE. Adv: Jimeng Sun. 12/11/17
Sungtae An. GT/CSE. Adv: Jimeng Sun. 11/28/17
Robert Chen. GT/CSE. Adv: Jimeng Sun. 3/15/17
Amrita Gupta. GT/CSE. Adv: Bistra Dilkina. 11/30/16
Caleb Robinson. GT/CSE. Adv: Bistra Dilkina. 11/22/16
Hyunjee Jin. GT/CSE. Adv: Dimitri Mavris. 11/21/16
Fred Hohman. GT/CSE. Adv: Polo Chau. 11/17/16
Edward Choi. GT/CSE. Adv: Jimeng Sun. 11/9/16
Saman Yarmohammadi. GT/School of Building Construction. Adv: Baabak Ashuri. 12/16
Shang-Tse Chen. GT/CS. Adv: Polo Chau. 3/29/16
Sarah Karamanti. GT/CSE. Adv: Rich Vuduc. 12/3/15
Young Jin Kim. GT/CSE. Adv: Dimitri Mavris. 11/23/15
Youngchul Park. GT/CSE. Adv: Dimitri Mavris. 11/23/15
Bo Dai. GT/CSE. Adv: Le Song. 4/22/15
Minsuk (Brian) Kahng. GT/CS. Adv: Polo Chau. 4/29/15
Mehrddad Farajtabar. GT/CSE. Adv: Edmond Chow. 11/25/2014
[Lluís Miquel Munguia](#). GT/CSE. Adv: David Bader. 11/8/13
[James Fairbanks](#). GT/CSE. Adv: David Bader. 10/9/13.
Bo Xie. GT/CS. Adv: Haesun Park, Le Song. 11/5/14
Kunal Malhotra. GT/CS. Adv: Sham Navathe. 4/22/13
Ramakrishnan (Ramki) Kannan. GT/CSE. Adv: Haesun Park. 3/29/13
Chad Stolper. GT/IC. Adv: John Stasko. 3/27/13

Anita Zakrzewska. GT/CSE. Adv: David Bader. 12/6/12

Robert Pienta. GT/CSE. Adv: Richard Fujimoto. 10/5/12

Masters Thesis Marc-Henri Bleu-Laine. GT/AE. Dimitri Mavris. Proposal: 04/12/21.

Aroua Gharbi. GT/CSE. Adv: Dimitri Mavris. Defense: 11/18/16

Kevin flansburg. GT/CS. Adv: Taesoo Kim. Defense: 11/23/15

Kaushik Patnaik. GT/CSE. Adv: Le Song

Adam Coulon. GT/CSE (Aerospace Eng). Scott Duncan (Chair), Dimitri Mavris. Proposal: 4/2/14. Defense: 11/10/14.

Misc *Mascot Task Force* committee member. Carnegie Mellon University. 2006.

The Chinese University of Hong Kong 40th Anniversary Concert committee. 2004.

PATENTS

Inferring File and Website Reputations by Belief Propagation Leveraging Machine Reputation. Adam Wright (Symantec), Duen Horng Chau. U.S. Patent No. 8,341,745. 25 Dec. 2012.

MEDIA COVERAGE

[The AI industry is hot right now. 5 experts share 4 tips for finding a job in the sector.](#) Business Insider. February 25, 2023. Rebecca Knight, Beatrice Nolan, and Lakshmi Varanasi.

[What Zillow's failed algorithm means for the future of data science.](#) Fortune. February 01, 2022. Erick Sherman.

[Why is This New Deep Learning Visualization Going Viral?](#) Georgia Tech. October 30, 2020.

[Finally, A Site that Crops Headshots Instantly \(Without Sharing Your Photos\).](#) Georgia Tech. September 17, 2020.

[How Do Neural Networks Learn?](#) episode of Two Minute Papers (102k+ view; 790k+ subscribers) featuring [CNN Explainer](#). June 27, 2020.

[Machine Learning Technique Helps Wearable Devices Get Better at Diagnosing Sleep Disorders and Quality.](#) Georgia Tech. April 15, 2020.

[Intel Joins Georgia Tech in DARPA Program to Mitigate Machine Learning Deception Attacks.](#) Cal Jeffrey. TechSpot. April 9, 2020.

[Intel Joins Georgia Tech in DARPA Program to Mitigate Machine Learning Deception Attacks.](#) Barron's. April 9, 2020.

[Intel and Georgia Tech join DARPA program to thwart attacks against machine learning.](#) Kyt Dotson. Silicon Angle. April 9, 2020.

[Intel Joins Georgia Tech in DARPA Program to Mitigate Machine Learning Deception Attacks.](#) Yahoo! Finance. April 9, 2020.

[The Critical Importance Of The Intel DARPA GARD AI Initiative:](#) DARPA has defined a program called GARD, and both Intel and Georgia Tech have stepped up to help make us safe. Datamation. Rob Enderle. April 10, 2020.

[Intel takes the lead on DARPA effort to end machine-learning spoofing.](#) Jim Nash. April 10, 2020.

[DARPA is pouring millions into a new AI defense program. Here are the companies leading the charge.](#) Protocol. Hayden Field. April 9, 2020.

[Intel involved in AI defence programme.](#) Fudzilla. Nick Farrell. April 10, 2020.

[DARPA snags Intel to lead its machine learning security tech.](#) TechCrunch. Zack Whittaker. April 9, 2020. Also see the [Japanese Tech Crunch](#) version.

[Intel, Georgia Tech join multimillion-dollar DARPA project.](#) Seeking Alpha. Brandy Betz. April 9, 2020.

[Intel Joins Georgia Tech in DARPA Program to Mitigate Machine Learning Deception Attacks.](#) Business Wire. April 9, 2020.

[Intel Joins Georgia Tech in DARPA Program to Mitigate Machine Learning Deception Attacks.](#) Intel News Bytes. April 9, 2020

[Georgia Tech and Intel Awarded Multimillion-Dollar Program to Defend Against Attacks on AI.](#) Kristen Perez. Georgia Tech CSE. April 8, 2020

[Virtual, augmented reality platforms emerge as computer science teaching tool.](#) Lauren Barack. Education Dive. March 13, 2019

[K-12 Teachers Use Virtual and Augmented Reality Platforms to Teach Coding.](#) Eli Zimmerman. EdTech. Feb 28, 2019.

[These Wearables Detect Health Issues Before They Happen.](#) Elizabeth Woyke. **MIT Technology Review**. 11/30/16.

[Feature: Can your mobile phone make you healthier?.](#) Kelly Servick. **Science Magazine**. 12/10/2015.

[The Secret World of Stolen Smartphones, Where Business Is Booming.](#) Matthew Shaer. **Wired**, 12/18/14.

LatentGesture: Active Mobile Device Authentication

Personal Touch Signature Makes Mobile Devices More Secure. Georgia Tech Press Release. April 7, 2014. Jason Maderer.
 Forget fingerprints: Your phone could lock out thieves by learning your 'touch signature'. Digital Trends. April 9, 2014. Christian Brazil Bautista.
 Researchers teach smartphones to recognize your activity, lock out everyone else. Engadget. Apr 7, 2014. Billy Steele.
 LatentGesture learns your unique touch signature, keeps everyone else out. Android Authority. Apr 9, 2014. Elmer Montejo.
 LatentGesture Recognizes Touch for Added Security Display Central. Apr 18, 2014. Arthur Berman.
 Georgia Tech researchers want to kill the smartphone passcode with "touch signature." Atlanta Business Chronicle. Apr 9, 2014. Urvaksh Karkaria.
 LatentGesture learns a smartphone's owner by touch and can lock the phone if it's used by another. Pocket-lint. Apr 9, 2014. Luke Edwards.
 LatentGesture: A Promising Future For Smartphone Security. Information Security Buzz. Apr 8, 2014. David Bisson.
 New innovation could put an end to smartphone thefts forever Yahoo News. Apr 9, 2014. Brad Reed.
 LatentGesture to make mobile devices more secure. Digit. Apr 9, 2014. Silky Malhotra.
 LatentGesture Uses Your Screen Taps & Swipes To Provide Security. Crazy Engineers. Apr 8, 2014. Ankita Katdare.
 LatentGesture Makes Smartphones Recognize You By Touch. Engismo. April 10, 2014. Mansoor Mubashra.
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 "Researchers: Software Can Nip eBay Fraud in The Bud", Bob Sullivan, **MSNBC**, December 8, 2006.
KQV Radio live interview, Host: Frank Gottlieb, December 10, 2006.
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 "CMU Develops Program To Online Auction Fraud", Keith Jones, **KDKA-TV News**, originally aired December 12, 2006.
BizRadio live interview, Host: Brent Clenton, December 13, 2006
 "Online Auction Frauds Not As Clever As They Think, Researchers Say", Alpha Doggs, **Network World**, December 5, 2006.

DESIGN AWARDS & LEADERSHIP

- 2006 **Winner**, Carnegie Mellon ID card design contest.
Winner, *Graduate Student Assembly* logo design contest. Carnegie Mellon University.
Winner, *Language Technologies Institute* T-shirt design contest. Carnegie Mellon University.
- 2005 **Design lead**, HCI Masters capstone project. Client: *Office of Naval Research*.
- 2004 **Winner**, webpage design contest for the *New Asia College* homepage. The Chinese University of Hong Kong.
Lead graphics designer, The Chinese University of Hong Kong 40th Anniversary Concert.
- 1999 - 2000 **Art Director** of school yearbook. Diocesan Boys' School (Hong Kong).

ART INSTALLATIONS

Butterflies

Installed at the Pittsburgh Children's Museum on March 5, 2009
 Team: Jesse Chornig, Joanna Ricou, Polo Chau

The Curator

Installed at the Pittsburgh Children's Museum on April 25, 2009
 Team: Polo Chau François Chu, Sue Ann Hong, Patrick Gage Kelley

SKILLS

HCI Contextual inquiry Think-aloud protocol Cognitive walkthrough Heuristic evaluation GOMS Persona Focus groups
 Rapid paper prototyping

Programming Java C++ C SQL VB Assembly JavaScript ActionScript CSS PHP ASP XML HTML

Design Affinity Designer Photoshop Illustrator Premiere InDesign Flash Lightwave 3D 3D Studio MAX

Music Pianist (30+ years) Cellist (30+ years) High school string orchestra conductor Chamber music group member Choir member

Languages English Mandarin Cantonese (native)