Chris Bryan

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Research Interests

Data visualization, human-computer interaction, privacy-enhancing technologies, interfaces for explainable AI/ML, NLP, and RL, augmented and virtual reality, visual perception and cognition.

Education

2012 – 2018	**Ph.D. in Computer Science, University of California, Davis**. Dissertation: "Advanced Techniques and Cognitive Considerations for Explanatory Visualization and Data Storytelling." Committee: Kwan-Liu Ma (advisor), Zhou Yu, Michael Neff.
2004 – 2008	**B.S. *cum laude* in Computer Science (Honors College), University of Arkansas.** Minors: Mathematics, Spanish. Thesis: "A Performance and Productivity Study using MPI, Titanium, and Fortress." Advisor: Amy Apon.

Appointments & Prior Employment

2018 – present	**Assistant Professor**. School of Computing and Augmented Intelligence, Arizona State University (Tempe, AZ). (*Note:* This school was renamed from the School of Computing, Informatics, and Decision Systems Engineering in 2021.)
2018	**Adjunct Professor**. Department of Computer Science, University of San Francisco (San Francisco, CA).
2012 – 2018	**Graduate Student Researcher**. Visualization and Interface Design Innovation (VIDi) Group, University of California, Davis (Davis, CA).
2017	**Graduate Student Intern**. Center for Applied Scientific Computing (CASC), Lawrence Livermore National Laboratory (Livermore, CA).

2013 – 2016	**Graduate Student Intern**. Data Science at Scale (DSS) Group, Los Alamos National Laboratory (Los Alamos, NM).
2009 – 2012	**Programmer Analyst**. Integrated Capacity Solutions (ICS) Division, J.B. Hunt Transport Services, Inc. (Lowell, AR).

Honors

2026 Honorable Mention (top 5%) at the Eurographics Conference on Visualization (EuroVis 2026) for *Engagement vs. Understanding: Comparing Immersive Virtual Reality and Desktop Displays for Climate Data Visualization*

2025 Fulton Top 5% Teaching Faculty Award in the Ira A. Fulton Schools of Engineering for AY 2024 – 2025

2025 Honorable Mention (top 25%) at IEEE PacificVis 2025 Data Storytelling Contest for *The Story of Wagyu: Bringing Charm of Japan's Pride to the World*.

2024 Dean's Dissertation Award for my student Anjana Arunkumar (awarded to up to 5% of the top PhD graduates from the Ira A Fulton Fulton Schools of Engineering)

2024 Fulton Top 5% Teaching Faculty Award in the Ira A. Fulton Schools of Engineering for AY 2023 – 2024

2023 Fulton Top 5% Teaching Faculty Award in the Ira A. Fulton Schools of Engineering for AY 2022 – 2023

2021 Outstanding Guest Editor Award for *IEEE Computer Graphics & Applications Special Issue on Powering Visualization with Deep Learning*

2020 Honorable Mention (top 25%) at the VAST Challenge 2020 for *TotemFinder: A Visual Analytics Approach for Image-based Key Players Identification.*

2017 Honorable Mention (top 5%) at IEEE PacificVis Symposium (PacificVis 2017) for *MeetingVis: Visual Narratives to Assist in Recalling Meeting Context and Content.*

Research Publications

Peer-Reviewed Journal Publications

[J1] Andreas Bueckle, Christiane Hütter, Renata Raidou, Chris Bryan, Peter Mindek, Hannes Kaufmann, Niklas Elmqvist, Jörg Menche, and Katy Börner. "Challenges and Opportunities for

Theory-Grounded Data Visualization in Extended Reality." *To be published in IEEE Computer Graphics and Applications 2026.*

[J2] Anjana Arunkumar, Jamie Liu, and Chris Bryan. "Engagement vs. Understanding: Comparing Immersive Virtual Reality and Desktop Displays for Climate Data Visualization." *to be published in Computer Graphics Forum 2026.*

[J3] Jinbin Huang, Wenbin He, Liang Gou, Liu Ren and Chris Bryan. "InFiConD: Interactive No-code Fine-tuning with Concept-based Knowledge Distillation." *to be published in Computer Graphics Forum 2026.*

[J4] Zhuojun Jiang, Anjana Arunkumar, and Chris Bryan. "The Hue-Man Factor: An Empirical Evaluation of Visualization Perception and Accessibility Across Color Vision Profiles." *IEEE Transactions on Visualization and Computer Graphics* 32, no. 1 (2026): 703–713.

[J5] Anjana Arunkumar, Lace Padilla, and Chris Bryan. "Modeling and Measuring the Chart Communication Recall Process." *Computer Graphics Forum* 44, no. 3 (2025): e70099.

[J6] Aditi Mishra, Bretho Danzy, Utkarsh Soni, Anjana Arunkumar, Jinbin Huang, Bum Chul Kwon, and Chris Bryan. "PromptAid: Visual Prompt Exploration, Perturbation, Testing and Iteration for Large Language Models." *IEEE Transactions on Visualization and Computer Graphics* 31, no. 10 (2025): 6946–6962.

[J7] Xumeng Wang, Shuangcheng Jiao, and Chris Bryan. "Defogger: A Visual Analysis Approach for Data Exploration of Sensitive Data Protected by Differential Privacy." *IEEE Transactions on Visualization and Computer Graphics* 31, no. 1 (2025): 448–458.

[J8] Anjana Arunkumar, Lace Padilla, and Chris Bryan. "Mind Drifts, Data Shifts: Utilizing Mind Wandering to Track the Evolution of User Experience with Data Visualizations." *IEEE Transactions on Visualization and Computer Graphics* 31, no. 1 (2025): 1139–1179.

[J9] Anjana Arunkumar, Lace Padilla, Gi-Yeul Bae, and Chris Bryan. "Image or Information? Examining the Nature and Impact of Visualization Perceptual Classification." *IEEE Transactions on Visualization and Computer Graphics* 30, no. 1 (2024): 1030–1040.

[J10] Anjana Arunkumar, Shubham Sharma, Rakhi Agrawal, Sriram Chandrasekaran, and Chris Bryan. "LINGO: Visually Debiasing Natural Language Instructions to Support Task Diversity." *Computer Graphics Forum* 42, no. 3 (2023): 409–421.

[J11] Jinbin Huang, Aditi Mishra, B.C. Kwon, and Chris Bryan. "ConceptExplainer: Understanding the Mental Model of Deep Learning Algorithms via Interactive Concept-based Explanations." *IEEE Transactions on Visualization and Computer Graphics* 29, no. 1 (2022): 831–841.

[J12] Anjana Arunkumar, Andrea Pinceti, Lalitha Sankar, and Chris Bryan. "PMU Tracker: A Visualization Platform for Egocentric Event Propagation Analysis in the Power Grid." *IEEE Transactions on Visualization and Computer Graphics* 29, no. 1 (2022): 1081–1090.

[J13] Anjana Arunkumar, Nitin Gupta, Andrea Pinceti, Lalitha Sankar, and Chris Bryan. “PMUVis: A Large Scale Platform to Assist Power System Operators in a Smart Grid.” *IEEE Computer Graphics and Applications* 42, no. 6 (2022): 84–95.

[J14] Jian Zhao, Shenyu Xu, Senthil Chandrasegaran, Chris Bryan, Fan Du, Aditi Mishra, Xin Qian, Yiran Li, and Kwan-Liu Ma. "ChartStory: Automated Partitioning, Layout, and Captioning of Charts into Comic-Style Narratives." *IEEE Transactions on Visualization and Computer Graphics* 29, no. 2 (2021): 1384–1399.

[J15] Chris Bryan, Aditi Mishra, Hidekazu Shidara, and Kwan-Liu Ma. "Analyzing Gaze Behavior for Text-Embellished Narrative Visualizations under Different Task Scenarios." *Visual Informatics* 4, no. 3 (2020): 41–50.

[J16] Xumeng Wang, Chris Bryan, Yiran Li, Rusheng Pan, Yanling Liu, Wei Chen, and Kwan-Liu Ma. "Umbra: A Visual Analysis Approach for Defense Construction against Inference Attacks on Sensitive Information." *IEEE Transactions on Visualization and Computer Graphics* 28, no. 7 (2020): 2776–2790.

[J17] Xumeng Wang, Wei Chen, Jia-Kai Chou, Chris Bryan, Huihua Guan, Wenlong Chen, Rusheng Pan, and Kwan-Liu Ma. "GraphProtector: A Visual Interface for Employing and Assessing Multiple Privacy Preserving Graph Algorithms." *IEEE Transactions on Visualization and Computer Graphics* 25, no. 1 (2018): 193–203.

[J18] Shenyu Xu, Chris Bryan, Jianping Kelvin Li, Jian Zhao, and Kwan-Liu Ma. "Chart Constellations: Effective Chart Summarization for Collaborative and Multi-User Analyses." *Computer Graphics Forum* 37, no. 3 (2018): 75–86.

[J19] Yang Shi, Chris Bryan, Sridatt Bhamidipati, Ying Zhao, Yaoxue Zhang, and Kwan-Liu Ma. "MeetingVis: Visual Narratives to Assist in Recalling Meeting Context and Content." *IEEE Transactions on Visualization and Computer Graphics* 24, no. 6 (2018): 1918–1929.

[J20] Chris Bryan, Kwan-Liu Ma, and Jonathan Woodring. "Temporal summary images: An Approach to Narrative Visualization via Interactive Annotation Generation and Placement." *IEEE Transactions on Visualization and Computer Graphics* 23, no. 1 (2016): 511–520.

[J21] Chris Bryan, Gregory Guterman, Kwan-Liu Ma, Harris Lewin, Denis Larkin, Jaebum Kim, Jian Ma, and Marta Farre. "Synteny Explorer: An Interactive Visualization Application for Teaching Genome Evolution." *IEEE Transactions on Visualization and Computer Graphics* 23, no. 1 (2016): 711–720.

Peer-Reviewed Conference & Symposium Publications

[C1] Anjana Arunkumar and Chris Bryan. “Evaluating Cluster Dendrograms for Spatiotemporal Anomaly Tracking.” *to be published in Proceedings of EuroVis 2026 - Short Papers.*

[C2] Sebastian Martinez, Naman Ahuja, Fenil Bardoliya, Suparno Roy Chowdhury, Chris Bryan, and Vivek Gupta. “SPORTSQL: An Interactive System for Real-Time Sports Reasoning and Visualization.” In *Proceedings of The 14th International Joint Conference on Natural Language*

Processing and The 4th Conference of the Asia-Pacific Chapter of the Association for Computational Linguistics: System Demonstrations, pp. 94–101. 2025.

[C3] Utkarsh Singh, Bretho Danzy III, Afzal Umar, Syed Naqvi, Haider Abdul-Muhsin, Ewan Cobran, Irbaz Riaz, and Chris Bryan. “PatientLens: AI-Enabled Interactive Avatars for Patient Report Summarization and Visualization.” In *Proceedings of the 59th Hawaii International Conference on System Sciences (HICSS)*, pp. 3473–3482. 2026

[C4] Shubham Chawla, Bretho Danzy III, Jai Narula, Ashish Amresh, and Chris Bryan. “Developing The Strategists, an Online, AI-Aware Financial Investment Game for Technology-Enhanced Learning and Research.” In *Proceedings of the 59th Hawaii International Conference on System Sciences (HICSS)*, pp. 7173–7182. 2026

[C5] Shubham Chawla, Michael Kintscher, Jai Narula, Anjana Arunkumar, Ashish Amresh, and Chris Bryan. “VizCoach: Designing an Orchestration-Based Tool for Data Visualization Education.” In *Proceedings of the 59th Hawaii International Conference on System Sciences (HICSS)*, pp. 34–43, 2026.

[C6] Anjana Arunkumar, Lace Padilla, and Chris Bryan. “Lost in Translation: How Does Bilingualism Shape Reader Preferences for Annotated Charts?” In *Proceedings of the 2025 CHI Conference on Human Factors in Computing Systems*, pp. 1–22, 2025.

[C7] Aditi Mishra, Ayan Biswas, and Chris Bryan. “VeCNA: Visual Exploration, Comparison and Analysis of Reconstructed Spatiotemporal Scientific Simulation Data.” In *EuroVis 2025 - Short Papers*. 2025.

[C8] Michael Kintscher, Jinbin Huang, Anjana Arunkumar, Ashish Amresh, and Chris Bryan. “Measuring and Comparing Collaborative Visualization Behaviors in Desktop and Augmented Reality Environments.” In *Proceedings of the 29th ACM Symposium on Virtual Reality Software and Technology (VRST)*, pp. 1–11. 2023.

[C9] Anjana Arunkumar, Swaroop Mishra, Bhavdeep Sachdeva, Chitta Baral, and Chris Bryan. “Real-Time Visual Feedback to Guide Benchmark Creation: A Human-and-Metric-in-the-Loop Workflow.” *In Proceedings of the 17th Conference of the European Chapter of the Association for Computational Linguistics (EACL)*, pp. 2899–2927. 2023.

[C10] Aditi Mishra, Utkarsh Soni, Jinbin Huang, and Chris Bryan. "Why? Why Not? When? Visual Explanations of Agent Behavior in Reinforcement Learning." In *2022 IEEE Pacific Visualization Symposium (PacificVis)*, pp. 111–120. 2022.

[C11] Aditi Mishra, Shashank Ginjpalli, and Chris Bryan. “News Kaleidoscope: Visual Investigation of Coverage Diversity in News Event Reporting.” In *2022 IEEE Pacific Visualization Symposium (PacificVis)*, pp. 131–140. 2022.

[C12] Anjana Arunkumar, Shashank Ginjpalli, and Chris Bryan. "Bayesian Modelling of Alluvial Diagram Complexity." In *2021 IEEE Visualization Conference (VIS)*, pp. 51–55. 2021.

[C13] Senthil Chandrasegaran, Chris Bryan, Hidekazu Shidara, Tung-Yen Chuang, and Kwan-Liu Ma. "TalkTraces: Real-time Capture and Visualization of Verbal Content in Meetings." In *Proceedings of the 2019 CHI Conference on Human Factors in Computing Systems*, pp. 1–14. 2019.

[C14] Jia-Kai Chou, Chris Bryan, Jing Li, and Kwan-Liu Ma. "An Empirical Study on Perceptually Masking Privacy in Graph Visualizations." In *2018 IEEE Symposium on Visualization for Cyber Security (VizSec)*, pp. 1–8. 2018.

[C15] Jacqueline Chu, Chris Bryan, Min Shih, Leonardo Ferrer, and Kwan-Liu Ma. "Navigable Videos for Presenting Scientific Data on Affordable Head-Mounted Displays." In *Proceedings of the 8th ACM on Multimedia Systems Conference*, pp. 250–260. 2017.

[C16] Jia-Kai Chou, Chris Bryan, and Kwan-Liu Ma. "Privacy Preserving Visualization for Social Network Data with Ontology Information." In *2017 IEEE Pacific Visualization Symposium (PacificVis)*, pp. 11–20. 2017.

[C17] Chris Bryan,, Xue Wu, Susan Mniszewski, and Kwan-Liu Ma. "Integrating Predictive Analytics into a Spatiotemporal Epidemic Simulation." In *2015 IEEE Conference on Visual Analytics Science and Technology (VAST)*, pp. 17–24, 2015.

[C18] Susan Mniszewski, C. A. Manore, Chris Bryan, Sara Y. Del Valle, and Douglas Roberts. "Towards a Hybrid Agent-Based Model for Mosquito Borne Disease." In *Summer Computer Simulation Conference:(SCSC 2014): 2014 Summer Simulation Multi-Conference: Monterey, California, USA, 6-10 July 2014. Summer Computer Simulation Conference (2014: Monterey, Calif.)*, vol. 2014. 2014.

[C19] Chris Bryan, Kwan-Liu Ma, and Yang-Chih Fu. "An Interactive Visualization Interface for Studying Egocentric, Categorical, Contact Diary Datasets." In *Proceedings of the 2013 IEEE/ACM International Conference on Advances in Social Networks Analysis and Mining*, pp. 771–778. 2013.

Peer-Reviewed Workshop Publications

[W1] Ayan Biswas, Aditi Mishra, Meghanto Majumder, Subhashis Hazarika, Alexander Most, Juan Castorena, Chris Bryan, Patrick McCormick, James Ahrens, Earl Lawrence, and Aric Hagberg. “Filling the Void: Data-Driven Machine Learning-based Reconstruction of Sampled Spatiotemporal Scientific Simulation Data.” In *SC24-W: Workshops of the International Conference for High Performance Computing, Networking, Storage and Analysis*, pp. 290–299. 2024

[W2] Jinbin Huang, Chen Chen, Aditi Mishra, Bum Chul Kwon, Zhicheng Liu, and Chris Bryan. “On CLIP’s Ability of Analyzing Fake Images at a Large Scale: Why are They Fake?” In *GenAICHI Generative AI and CHI Workshop at ACM SIGCHI 2024.*

[W3] Jinbin Huang, Shuang Liang, Qi Xiong, Yu Gao, Chao Mei, Yi Xu, and Chris Bryan. “SPARVIS: Combining Smartphone and Augmented Reality for Visual Data Analytics.” In *2022 IEEE International Symposium on Mixed and Augmented Reality Adjunct (ISMAR-Adjunct)*, pp. 111–117. 2022.

[W4] Jinbin Huang, Jonathan Plasencia, Dianna Bardo, Nicholas Huber, Erik Ellsworth, Steven Zangwill, and Chris Bryan. "Phoenix Virtual Heart: A Hybrid VR-Desktop Visualization System for Cardiac Surgery Planning and Education." In *2021 IEEE Workshop on Visual Analytics in Healthcare (VAHC)*, pp. 36–40. 2021.

[W5] Anjana Arunkumar, Swaroop Mishra, and Chris Bryan. “A Visual Exploration of Fair Evaluation for ML – Bridging the Gap Between Research and the Real World.” In *3rd Workshop on Visualization for AI Explainability at IEEE VIS 2020*.

[W6] Anjana Arunkumar, Swaroop Mishra, Bhavdeep Singh Sachdeva, Chitta Baral, and Chris Bryan. “Real-Time Visual Feedback for Educative Benchmark Creation: A Human-and-Metric-in-the-Loop Workflow.” In *NeurIPS 2020 Workshop on Human And Machine in-the-Loop Evaluation and Learning Strategies (HAMLETS 2020)*.

[W7] Swaroop Mishra, Anjana Arunkumar, Chris Bryan, and Chitta Baral. "Our Evaluation Metric Needs an Update to Encourage Generalization." In *ICML 2020 Workshop on Uncertainty and Robustness in Deep Learning.*

[W8] Chris Bryan, Susan Mniszewski, and Kwan-Liu Ma. “Integrating Predictive Visualization with the Epidemic Disease Simulation System.” In *IEEE VIS 2014 Workshop on Visualization for Predictive Analytics*.

[W9] Chris Bryan, Wes Emeneker, and Amy Apon. “A Performance and Productivity Study using MPI, Titanium, and Fortress.” In *IEEE International Conference on High Performance Computing (HiPC08) Student Symposium, 2008.*

Peer-Reviewed Contest Shortlists

[E1] Yuki Ueno, Zhuojun Jiang, Bretho Danzy III, Michael Kintscher, Nianwen Dan, Utkarsh Singh, and Chris Bryan. “The Story of Wagyu: Bringing Charm of Japan's Pride to the World.” In *IEEE PacificVis 2025 Visual Storytelling Contest*.

[E2] Jinbin Huang, Aditi Mishra, Anjana Arunkumar, and Chris Bryan. “TotemFinder: A Visual Analytics Approach for Image-based Key Players Identification.” In 2020 IEEE Conference on Visual Analytics Science and Technology (VAST Challenge).

[E3] Hidekazu Shidara, Chris Bryan, Oh-Hyun Kwon, Kwan-Liu Ma. “North Korea: Real or Paper Tiger?” In *IEEE PacificVis 2018 Visual Storytelling Contest*.

[E4] Chris Bryan, Keshav Dasu, Sravya Divakarla, Kwan-Liu Ma. “Summarizing the U.S. Presidential Election Day 2016” In *IEEE PacificVis 2017 Visual Storytelling Contest*.

Invited Talks & Presentations

Note: Conference paper presentations are not included.

Nov 2025	Invited Panelist Speaker	TALK, TRY, TELL: Challenges and Opportunities for Theory-Grounded Data Visualization in Extended Reality, IEEE VIS Conference (Vienna, Austria)
Nov 2024	Invited Talk	*Using Visual Analytics to Support Human Interpretable AI Workflows*, Scientific Computing and Imaging Institute (SCI) Seminar, University of Utah (Salt Lake City, UT)
July 2024	Invited Talk	*Accessible and Interpretable AI-Driven Workflows through Advanced Human-Centric Interfaces* (Los Alamos, NM)
May 2024	Invited Presentation	*Advanced Interfaces and Human-in-the-Loop Workflows for Next Generation AI*, NSF AI/GenAI CARTA Symposium (Piscataway, NJ)
Jan 2024	Invited Demo	ASU Space Futures Convening (Scottsdale, AZ)
June 2022	Invited Talk	VIS Summer Camp (Atlantic City, NJ)
April 2022	Invited Talk	*Exploring and Explaining Complex Data at the Sonoran Visualization Laboratory*, CNS Research Showcase (Indiana University).
Aug 2021	Invited Talk	VIS Summer Camp (Minneapolis, MN).
Feb 2020	Invited Talk	*Human-Centered Visualization Design*, ASU Tableau User Group (Tempe, AZ).
July 2019	Invited Talk	*Interactive Visualization for Exploring and Explaining Complex Data*, Los Alamos National Laboratory (Los Alamos, NM).
Nov 2019	Invited Talk	*Visualization of Complex Data for Nonexperts*, ASU SFIS Unplugged (Tempe, AZ).
March 2018	Invited Talk	*From Explanatory to Exploratory Visualization*, University of San Francisco (San Francisco, CA).
March 2016	Invited Talk	*Developing New Visual Approaches that Provide Insight into Scientific and Social Media Data*, UC Davis RISE Symposium (Davis, CA).

Professional Activities & External Service

Steering Committee Member

2022 – 2025	IEEE Symposium on Visualization for Cyber Security (VizSec)

Organizing Committee Member

2020 – 2022, 2024 – 2026	IEEE PacificVis Visualization Symposium (PacificVis)
2023 – 2025	IEEE VIS Conference
2019 – 2022	IEEE Symposium on Visualization for Cyber Security (VizSec)
2021	Arizona VIS 2021 (IEEE VIS Satellite Event)

Subcommittee Member

2023 – present	Associate Chair for Visualization Subcommittee, ACM Conference on Human Factors in Computing Systems (SIGCHI)

Program Committee Member

2023 – present	EuroGraphics Conference on Visualization (EuroVis), Short Papers Tract
2022 – present	IEEE VIS Conference
2020 – present	IEEE VIS Conference, Short Papers Tract
2019 – present	IEEE Pacific Visualization Symposium (PacificVis)
2024 – 2025	EuroGraphics Conference on Visualization (EuroVis), State-of-the-Art Reports (STARs) Tract
2021 – 2024	EuroGraphics Conference on Visualization (EuroVis)
2020	ACM International Conference on Supporting Group Work (GROUP)
2020	International Conference on Information Visualization Theory and Applications (IVAPP)
2019	IEEE VIS Conference (SciVis Short Papers Tract)
2018 – 2022	IEEE Symposium on Large Data Analysis and Visualization (LDAV)
2018 – 2020, 2022	IEEE International Conference On Big Data Service And Applications (BigData-Service)
2018, 2022 – 2024	International Symposium on Visual Computing (ISCV)

Journal Editing

2020 – 2021	Guest Associate Editor, *IEEE Computer Graphics & Applications*, Special Issue on Powering Visualization with Deep Learning (co-editors: Siwei Fu, Jian Zhao, Yingcai Wu)

Major Journals & Conferences for which I regularly review

IEEE VIS Conference, IEEE Transactions on Visualization and Computing (TVCG), ACM Transactions on Interactive Intelligent Systems (TiiS), ACM Conference on Human Factors in Computing Systems (CHI), IEEE Pacific Visualization Symposium (PacificVis), Eurographics Conference on Visualization (EuroVis), IEEE Virtual Reality (VR), ACM Conference on Computer-Supported Cooperative Work and Social Computing (CSCW), ACM Symposium on User Interface Software and Technology (UIST)

Proposal Reviewing

2019 – present	National Science Foundation

Internal Service at ASU

2024 – present	**Computer Science Graduate Program Committee (GPC)**, School of Computing and Augmented Intelligence
2023 – present	**Student Organization Faculty Advisor**, ACM SIGGRAPH Student Chapter at ASU
2021 – present	**Fulton Undergraduate Research Initiative (FURI) Review Committee**, Ira A. Fulton Schools of Engineering.
2019 – present	**Speaker at E2 Camps for Incoming Freshmen Engineering Students**, Ira A. Fulton Schools of Engineering
2023 – 2024	**Search Committee Chair**, Computer Graphics and Virtual Reality Faculty Search, School of Computing and Augmented Intelligence.
2022 – 2023	**Search Committee Chair**, Human Centered and Affective Computing Faculty Search, School of Computing and Augmented Intelligence.
2018 – 2022	**Graduate Admissions Committee**, School of Computing and Augmented Intelligence

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Teaching Experience

Note: Classes are taught at ASU unless otherwise specified.

Fall 2026	CSE 578: Data Visualization (152 students)

	CSE 478: Foundations in Data Visualization (165 students)
Spring 2025	CSE 578: Data Visualization (177 students)
Fall 2024	CSE 578: Data Visualization (171 students)
	CSE 478: Foundations in Data Visualization (164 students)
Spring 2024	CSE 578: Data Visualization (145 students)
Fall 2023	CSE 578: Data Visualization (168 students)
	CSE 478: Foundations in Data Visualization (112 students)
Spring 2023	CSE 578: Data Visualization (133 students)
Fall 2022	CSE 578: Data Visualization (148 students)
	CSE 494: Foundations of Data Visualization (100 students)
Spring 2022	CSE 494: Foundations of Data Visualization (88 students)
Fall 2021	CSE 578: Data Visualization (148 students)
	CSE 494: Foundations of Data Visualization (75 students)
Fall 2020	CSE 578: Data Visualization (173 students)
	CSE 494: Foundations of Data Visualization (94 students)
	ASU 101: The ASU Experience (49 students, 3 sections)
Fall 2019	CSE 578: Data Visualization (126 students)
Spring 2019	CSE 310: Algorithms & Data Structures (128 students)
Fall 2018	CSE 578: Data Visualization (128 students)
Spring 2017	CS 212: Software Development (30 students, at University of San Francisco)
Spring 2016	ECS 163: Information Interfaces (52 Students, at University of California, Davis)

Student Advising & Mentoring

Ph.D. Students

2025 – present	Yuki Ueno
2024 – present	Zhuojun Jiang

2023 – present	Bretho Danzy
2021 – present	Michael Kintscher
2019 – 2024	Jinbin Huang (Dissertation: “Understand AI and Go Beyond: Designing Interactive Visual Analytics Systems for Efficient Deep Learning Interpretability and Development”)
2019 – 2024	Aditi Mishra (Dissertation: “Unlocking Artificial Intelligence: Interactive Visualizations for Novice Users to Explore, Understand, and Trust”)
2019 – 2024	Anjana Arunkumar (Dissertation: “The D.U.C.K. Bridge: Empowering Non-Experts in Data Visualization”)

Masters Students

Thesis Students

2026	Abhishek Dhadwal (Thesis: “An Interdisciplinary Framework for High-Throughput, Deterministic Segmentation of Sensitive Health Records in HL7 FHIR,” Co-chair: Adela Grando)
2024 – 2025	Sruthi Parimi (Thesis: “Evaluating the Impact of Binning Techniques on User Interpretation of Cloud Cover Visualizations”)
2024 – 2025	Utkarsh Singh (Thesis: “Reducing Cognitive Load in Healthcare: A Data-Driven Avatar System for Report Visualization”)
2023 – 2024	Shubham Chawla (Thesis: “Effects of an AI Intervention in a Financial Game Scenario”)
2022 – 2024	Manimozhi Sekar (Thesis: “Privacy-Preserving Visualizations using Vega-Lite”)
2022 – 2024	Jai Narula (Thesis: “Developing an Assistive Education Tool for Data Visualization”)
2021 – 2022	Shubham Sharma (Thesis: “Why Pop? A System to Explain How Deep Learning Models Classify Music”)
2021 – 2022	Jose Elenes (Thesis: “Anomaly Mining and Visualization of Autonomous Aerial Vehicles”)
2019 – 2020	Michael Kintscher (Thesis: “Exploring the Impact of Augmented Reality on Collaborative Decision-Making in Small Teams”)

Research Assistantships

2020 – 2021	Nitin Gupta

ASU Master's Opportunity for Research in Engineering (MORE) Students

2024	Kannak Sharma

2024	Utkarsh Singh
2023	Jai Narula

Undergraduate Students

Barrett Honors College Thesis Students

2024	Roshni Deb (Creative Project: “Visualizing Space-Related Activities Across the World”)
2023	Dheeti Deliwala (Creative Project: “A Computational Analysis on the Efficacy of Independent Redistricting Commissions”)
2021 – 2022	Andrew Murwin (Thesis: “The Efficacy of Different Time Steps in Data when Predicting Cryptocurrency Prices”)
2021 – 2022	Nandika Goyal (Thesis: “Augnosis: Self-Diagnosis in Augmented Reality”)
2020 – 2021	Shashank Ginjpalli (Thesis: “Modeling the Complexity of Sankey Diagrams”)
2019 – 2020	Avi Goodman (Thesis: “Predicting the Outcome of a Pitch Given the Type of Pitch for any Baseball Scenario”)

ASU Fulton Undergraduate Research Initiative (FURI) Students

2020 – 2021	Shashank Ginjpalli

Research Assistantships

2021 – 2022	Jaimie Liu
2019 – 2020	Danlin Li
2019	Sarthik Soni (IIT Bangalore)

Capstone Teams

2024 — 2025	Trevor Frerichs, Sherwin Wang, Noam Yakar, Owen Eaton, Adrian Ciotinga (Project: “Privacy Preserving Visualization Tool”)
2024 — 2025	Tejovrash Acharya, Mathm Alkaabi, Nianwen Dan, Esteban Lee, Riccardo De Maria (Project: “CODAP Privacy Plugin”)
2022 — 2023	Briggs Richardson, Nolan Takeshita, Sushrut Nunna, Damandeep Singh, Jacob Hensley (Project: “Qualitative Coding Desktop App”)
2021 — 2023	Liyah Coleman, Kaixuan Han, Logan Bock, Jesus Carrera, Guadalupe Higuera (Project: “AR+Smartphone Data Visualization App”)
2021 — 2022	Austin Frost, Evan Garvey, Jason Manuel, Matthew Zamora (Project: “Building A Collaborative Virtual Robotics IDE and Simulator for Teaching Engineering Concepts.”)

Student Committee Memberships

Note: Students and advisors are at ASU unless otherwise specified.

Ph.D. Students

2025 – present	Kevin John (Advisory: Hasti Seifi)
2025 – present	Yinan Li (Advisor: Hasti Seifi)
2025 – present	Bineeta Gupta (Advisor: Troy McDaniel)
2025 – present	Yujian Xiong (Advisor: Yalin Wang)
2024 – present	Rahat Zaman, University of Utah (Advisor: Paul Rosen)
2022 – present	Yixuan Wang (Advisor: Ross Maciejewski)
2022 – present	Vishnu Kakaraparthi (Advisor: Troy McDaniel)
2022 – 2026	Rostyslav Hnatyshyn (Dissertation: “Elucidation of Structural Transformations in Long Molecular Dynamics Simulations,” Advisor: Ross Maciejewski)
2022 – 2025	Fan Lei (Dissertation: “Visual Explanation Tools for Spatial Modeling,” Advisor: Ross Maciejewski)
2022 – 2024	Danielle Jacobs (Dissertation: “Towards a Cyber Harm Composite Indicator Framework for Citizens,” Advisor: Troy McDaniel)
2022 – 2024	Kanchan Chowdhury (Dissertation: “Exploration of Location-Aware Machine Learning for Spatiotemporal Vector and Raster Datasets,” Advisor: Mohamed Sarwat)
2023 – 2024	Utkarsh Soni (Dissertation: “Towards More Accessible Human-AI Interactions in Sequential Decision-Making Tasks,” Advisor: Subbarao Kambhampati)
2019 – 2023	Tiankai Xie (Dissertation: “Explaining the Vulnerabilities of Machine Learning through Visual Analytics,” Advisor: Ross Maciejewski)
2022 – 2022	Graziano Blasilli, University: Sapienza Università di Roma (Dissertation: “Cyber Threats Management using Visual Analytics,” Advisor: Giuseppe Santucci)
2021 – 2022	Jordan Miller (Dissertation: ““Can I consider you my friend?” Moving Beyond One-Sided Conversation in Social Robotics,” Advisor: Troy McDaniel)
2020 – 2022	Venkata Meduri (Dissertation: “Human-in-the-Loop Machine Learning Systems for Data Integration and Predictive Analytics,” Advisor: Mohamed Sarwat)
2019 – 2022	Rui Zhang (Dissertation: “Methods for Multiclass Geospatial Data Visualization,” Advisor: Ross Maciejewski)

MS Students

2026 – present	Tejal Tripathi (Advisor: Hessam Sarjoughian)
2026	Madumita Karthikeyan (Thesis: “Topological Augmentation of Latent Representations for Time Series Forecasting,” Advisor: Rong Pan)
2025 – 2026	Samuel Martin (Thesis: “VisionPulse: Supporting Exploration and Navigation for Blind and Low-Vision Users in Virtual Reality,” Advisor: Hasti Seifi)
2025	Karam Sahoo (Thesis: “Third-AI: Audio-First Visual Question Answering System for Eyes-Free Exploration in Virtual Environments,” Advisor: Hasti Seif)
2025	Peter Mousses (Thesis: “Facial Recognition for Personalized Advice in the Classroom,” Advisor: Ming Zhao)
2023 – 2024	Kevin John (Thesis: “AdapTics: A Toolkit for Creative Design and Integration of Real-Time Adaptive Mid-Air Ultrasound Tactons,” Advisor: Hasti Seifi)
2023	Suraj Jyothi Unni (Thesis: “Towards Robust VQA: Evaluations and Methods,” Advisor: Huan Liu)
2023	Viraj Thakka (Thesis: “Optimizing Consistency and Performance Trade-Off in Distributed Log-Structured Merge-Tree-based Key-Value Stores,” Advisor: Zhichao Cao)
2023	Sheetal Chandrakant Mohite (Thesis: “A Unified Visual and Persistent RESTful Tool for Modular and Hierarchical Modeling,” Advisor: Hessam Sarjoughian)
2020 – 2021	Rostyslav Hnatyshyn (Thesis: “A Visual Analytics Workflow for Detecting Transition Regions in Large-Scale Molecular Dynamics Simulations,” Advisor: Ross Maciejewski)
2020 – 2021	Kushal Reddy Papakannu (Thesis: “Examining User Engagement via Facial Expressions in Augmented Reality with Dynamic Time Warping,” Advisor: Sharon Hsaio)
2020 – 2021	Nithiya Uppara (Thesis: “Effects of Image Captioning with Description on the Working Memory,” Advisor: Troy McDaniel)

Undergraduate Students (Barrett Honors Thesis)

2026	Matthew Eisenberg (Thesis: “Expanding LLM-Assisted Translation of Natural Language to ML-Augmented SQL Queries with Applications in Database Education,” Advisor: Jia Zou)
2024 – 2025	Sebastian Martinez (Thesis: “Natural Language Processing for Intuitive Sports Data Querying and Visualization,” Advisor: Vivek Gupta)

Research Support

External Funding

NSF 2024 – 2027	(Co-PI) DGE-2350036: *SaTC: EDU: Investigating the Role of Storytelling Visualization in Privacy Education*. $500,000. (PI: Rakibul Hasan, my share: 48%).
NSF 2022 – present	(PI) CSN-2224066: *SaTC: CORE: Small: Effective Design and Recommendation for Privacy-Preserving Data Visualizations*. $550,000.
NSF 2022 – present	(PI) DUE-2216452: *IUSE: Developing and Evaluating a Classroom Orchestration Toolkit for Visualization Education*. $300,000 (co-PI: Ashish Amresh, his share: 5%).
Adobe Research 2021	(PI) *Researching Collaborative Creative Systems* (Unrestricted Gift). $10,000.
Phoenix Children's Hospital 2020 – 2021	(PI) *Development of a Virtual Reality Experience for Treatment Planning and for Patient and Family Education*. $56,871.
NSF 2019 – 2022	(Co-PI) OAC-1934766: *Collaborative Research: High-Dimensional Spatio-Temporal Data Science for a Resilient Power Grid: Towards Real-Time Integration of Synchrophasor Data*. $1,500,000 (PI: Lalitha Sankar, my share: 17%).

Internal (ASU-based) and Seed Funding

Interplanetary Initiative 2023 – present	(PI) *Global Heatmap of Space Activities.* $104,814 *AY 2022 – 2023: $51,081* *AY 2023 – 2024:* $28,733 AY 2024 – 2025: $25,000
Edson Foundation 2021 – 2022	(PI) *Developing CarePro Virtual*. $15,000.