

## EDUCATION

### PhD in Computer Science

Massachusetts Institute of Technology  
Advisor: [Arvind Satyanarayan](#), Visualization Group, CSAIL  
GPA: 5.0

2020 **MEng in Computer Science**

Massachusetts Institute of Technology  
Advisor: [Jim Glass](#), Spoken Language Systems Group, CSAIL  
Concentration: Machine Learning and Human Computer Interaction  
Thesis: Unsupervised Audio-Visual Learning in the Wild  
GPA: 5.0  
[Thesis](#)

2018 **SB in Computer Science**

Massachusetts Institute of Technology  
Minor: Economics  
GPA: 4.6

## ACADEMIC RESEARCH

2020 – Present **Massachusetts Institute of Technology**

Research Assistant, Visualization Group  
Mentor: [Arvind Satyanarayan](#)  
Investigating methods to expose and communicate the human-alignment of AI systems.

2018 – 2020 **Massachusetts Institute of Technology**

Research Assistant, Spoken Language Systems Group  
Mentors: [Jim Glass](#) • [David Harwath](#)  
Built self-supervised machine learning models capable of learning semantic concepts from unlabeled instructional videos.

2016 – 2018 **Massachusetts Institute of Technology**

Undergraduate Researcher, Spoken Language Systems Group  
Mentors: [Jim Glass](#) • [Tuka Alhanai](#)  
Applied machine learning techniques to detect early stage Alzheimer's Disease and clinical depression from patient speech.

Jan. 2016 **Leiden University**

Visiting Researcher, Institute of Advanced Computer Science  
Mentors: [Aske Plaat](#) • [Siegfried Nijssen](#)  
Developed clinical machine learning models to assist ICU physicians in estimating patients' blood transfusion needs.

2015 – 2016 **Massachusetts Institute of Technology**

Undergraduate Researcher, Paul F. Glenn Center for Biology of Aging Research  
Mentors: [Leonard P. Guarente](#) • [Christin Glorioso](#)  
Investigated correlations between gene expression and the onset of Alzheimer's Disease via computational methods.

## INDUSTRY RESEARCH

Summer 2025 **Apple**

Research Intern, Artificial Intelligence and Machine Learning Visualization Group  
Mentors: [Fred Hohman](#) • [Yannick Assogba](#) • [Donghao Ren](#) • [Dominik Moritz](#)

Summer 2023 **Apple**

Research Intern, Artificial Intelligence and Machine Learning Visualization Group  
Mentors: [Fred Hohman](#) • [Yannick Assogba](#) • [Donghao Ren](#) • [Dominik Moritz](#)  
Designed visual analytics tools to help model compression engineers evaluate and improve their model compression strategies.

Summer 2022 **IBM Research**

Research Intern, Visual AI Lab  
Mentor: [Hendrik Strobelt](#)  
Investigated visual and algorithmic methods to communicate machine learning model uncertainty to human stakeholders.

- Summer 2021 **IBM Research**  
Research Intern, Visual AI Lab  
Mentor: [Hendrik Strobelt](#)  
Synthesized a framework to document, compare, and communicate how model explanations perform across domains.
- Summer 2020 **IBM Research**  
Research Intern, Visual AI Lab  
Mentor: [Hendrik Strobelt](#)  
Developed methods for large-scale analysis of model behavior by quantifying the relationship between model and human decision making.

## PUBLICATIONS

- 2025 **Abstraction Alignment: Comparing Model-Learned and Human-Encoded Conceptual Relationships**  
[Angie Boggust](#) • [Hyemin Bang](#) • [Hendrik Strobelt](#) • [Arvind Satyanarayan](#)  
ACM Human Factors in Computing Systems (CHI) 2025  
[🔗 Project](#) [📄 Paper](#) [💻 Demo](#) [📺 Video](#) [📄 Preview](#) [🔗 Code](#)
- LeGrad: An Explainability Method for Vision Transformers via Feature Formation Sensitivity**  
[Walid Boussefham](#) • [Angie Boggust](#) • [Sofian Chayboubi](#) • [Hendrik Strobelt](#) • [Hilde Kuehne](#)  
International Conference on Computer Vision (ICCV) 2025  
[📄 Paper](#) [🔗 Code](#)
- 2024 **Compress and Compare: Interactively Evaluating Efficiency and Behavior Across ML Model Compression Experiments**  
[Angie Boggust](#)\* • [Venkatesh Sivaraman](#)\* • [Yannick Assogba](#) • [Donghao Ren](#) • [Dominik Moritz](#) • [Fred Hohman](#)  
IEEE Transactions on Visualization & Computer Graphics (VIS) 2024  
[🔗 Project](#) [📄 Paper](#) [📺 Video](#) [📄 Preview](#) [🔗 Code](#)
- 2023 **VisText: A Benchmark for Semantically Rich Chart Captioning**  
[Benny J. Tang](#)\* • [Angie Boggust](#)\* • [Arvind Satyanarayan](#)  
The Annual Meeting of the Association for Computational Linguistics (ACL) 2023  
[🔗 Project](#) [📄 Paper](#) [📺 Video](#) [🔗 Dataset](#) [🔗 Code](#) [📄 Press](#)  
[🏆 Outstanding Paper](#)
- Saliency Cards: A Framework to Characterize and Compare Saliency Methods**  
[Angie Boggust](#)\* • [Harini Suresh](#)\* • [Hendrik Strobelt](#) • [John V. Gutttag](#) • [Arvind Satyanarayan](#)  
ACM Conference on Fairness, Accountability, and Transparency (FAccT) 2023  
[🔗 Project](#) [📄 Paper](#) [📺 Video](#) [🔗 Repo](#) [📄 Press](#)
- DiffusionWorldViewer: Exposing and Broadening the Worldview Reflected by Generative Text-to-Image Models**  
[Zoe De Simone](#) • [Angie Boggust](#) • [Arvind Satyanarayan](#) • [Ashia Wilson](#)  
arXiv 2023  
[📄 Paper](#) [🔗 Code](#)
- 2022 **Shared Interest: Measuring Human-AI Alignment to Identify Recurring Patterns in Model Behavior**  
[Angie Boggust](#) • [Benjamin Hoover](#) • [Arvind Satyanarayan](#) • [Hendrik Strobelt](#)  
ACM Human Factors in Computing Systems (CHI) 2022  
[🔗 Project](#) [📄 Paper](#) [💻 Demo](#) [📺 Video](#) [📄 Preview](#) [🔗 Code](#) [📄 Press](#)  
[🏆 Best Paper Honorable Mention](#)
- Embedding Comparator: Visualizing Differences in Global Structure and Local Neighborhoods via Small Multiples**  
[Angie Boggust](#)\* • [Brandon Carter](#)\* • [Arvind Satyanarayan](#)  
ACM Intelligent User Interfaces (IUI) 2022  
[🔗 Project](#) [📄 Paper](#) [💻 Demo](#) [📺 Video](#) [🔗 Code](#)  
[🏆 Best Paper Honorable Mention](#)
- 2021 **AVLnet: Learning Audio-Visual Language Representations from Instructional Videos**  
[Andrew Rouditchenko](#)\* • [Angie Boggust](#)\* • [David Harwath](#) • [Brian Chen](#) • [Dhiraj Joshi](#) • [Samuel Thomas](#) • [Kartik Audhkhasi](#) • [Hilde Kuehne](#) • [Rameswar Panda](#) • [Rogerio Feris](#) • [Brian Kingsbury](#) • [Michael Picheny](#) • [Antonio Torralba](#) • [Jim Glass](#)  
INTERSPEECH Conference 2021  
[🔗 Project](#) [📄 Paper](#) [📺 Video](#) [🔗 Code](#)
- Cascaded Multilingual Audio-Visual Learning from Videos**  
[Andrew Rouditchenko](#) • [Angie Boggust](#) • [David Harwath](#) • [Samuel Thomas](#) • [Hilde Kuehne](#) • [Brian Chen](#) • [Rameswar Panda](#) • [Rogerio Feris](#) • [Michael Picheny](#) • [Jim Glass](#)  
INTERSPEECH Conference 2021  
[🔗 Project](#) [📄 Paper](#) [📺 Video](#) [🔗 Code](#)

## WORKSHOPS & DEMOS

- 2025 **Chatbot Evaluation Is (Sometimes) Ill-Posed: Contextualization Errors in the Human-Interface-Model Pipeline**  
[Aspen Hopkins](#)\* • [Angie Boggust](#)\* • [Harini Suresh](#)\*  
Human-centered Evaluation and Auditing of Language Models (HEAL) Workshop at ACM Human Factors in Computing Systems (CHI) 2025  
[📄 Paper](#)

- 2024 **Explanation Alignment: Quantifying the Correctness of Model Reasoning At Scale**  
 Hyemin Bang • [Angie Boggust](#) • Arvind Satyanarayan  
 European Conference on Computer Vision (ECCV) Explainable Computer Vision Workshop 2024  
[🔗 Project](#) [📄 Paper](#) [</> Code](#)
- 2023 **Uncertainty Fingerprints: Interpreting Model Decisions with Human Conceptual Hierarchies**  
[Angie Boggust](#) • Hendrik Strobelt • Arvind Satyanarayan  
 International Conference on Machine Learning (ICML) AI & HCI Workshop 2023  
[📄 Paper](#) [📄 Poster](#)
- 2021 **Shared Interest: Large-Scale Visual Analysis of Model Behavior by Measuring Human-AI Alignment**  
[Angie Boggust](#) • Benjamin Hoover • Arvind Satyanarayan • Hendrik Strobelt  
 International Conference on Machine Learning (ICML) Workshop on Human in the Loop Learning (HILL) 2021  
[🔗 Project](#) [📄 Poster](#)
- 2020 **Shared Interest: Human Annotation vs. AI Saliency**  
[Angie Boggust](#) • Benjamin Hoover • Arvind Satyanarayan • Hendrik Strobelt  
 Neural Information Processing Systems (NeurIPS) Demonstration 2020  
[🔗 Project](#) [📺 Video](#)
- Shared Interest: Human Annotation vs. AI Saliency**  
[Angie Boggust](#) • Benjamin Hoover • Arvind Satyanarayan • Hendrik Strobelt  
 IEEE VIS Workshop of Visualization for AI Explainability (VISxAI) 2020  
[🔗 Project](#) [📺 Video](#)
- 2019 **Grounding Spoken Language in Unlabeled Video**  
[Angie Boggust](#) • Kartik Audhkhasi • Dhiraj Joshi • David Harwath • Samuel Thomas • Rogerio Feris • Dan Gutfreund • Yang Zhang • Antonio Torralba • Michael Picheny • Jim Glass  
 Computer Vision and Pattern Recognition (CVPR) Sight and Sound Workshop 2019  
[📄 Paper](#) [📄 Poster](#)

## TALKS & PANELS

- Human-Centric AI Alignment**  
 May 2025 Boston Visualization + AI Meetup
- Abstraction Alignment**  
 Apr 2025 ACM Human Factors in Computing Systems (CHI) | [🗣️ Talk](#)
- Compress and Compare**  
 Oct 2024 IEEE Transactions on Visualization & Computer Graphics (VIS) | [🗣️ Talk](#)  
 Aug 2024 Apple
- How mechanistic interpretability can help keep AI safe and beneficial**  
 Aug 2024 New England Mechanistic Interpretability Workshop
- Saliency Cards**  
 Jul 2023 IBM  
 Jun 2023 ACM Conference on Fairness, Accountability, and Transparency (FAccT) | [🗣️ Talk](#)  
 Jun 2023 Apple
- Human-Aligned Machine Learning**  
 Jul 2022 University of Konstanz  
 Nov 2021 MIT EECS Graduate Women of Course 6 Summit
- Shared Interest**  
 Jun 2022 MIT Open Learning Horizons | [🗣️ Talk](#)  
 May 2022 ACM Human Factors in Computing Systems (CHI) | [🗣️ Talk](#)  
 Dec 2020 Neural Information Processing Systems (NeurIPS) Demonstration  
 Oct 2020 IEEE VIS Workshop of Visualization for AI Explainability (VISxAI)
- The Embedding Comparator**  
 Mar 2022 ACM Intelligent User Interfaces (IUI) | [🗣️ Talk](#)  
 Nov 2019 CSAIL-MSR Trustworthy and Robust AI Workshop

## PRESS

- Jun 2023 **Researchers teach an AI to write better chart captions**  
 Adam Zewe, MIT News  
[📄 Article](#)
- May 2023 **New tool helps people choose the right method for evaluating AI models**  
 Adam Zewe, MIT News  
[📄 Article](#)

Apr 2022 **New Test Compares AI Reasoning With Human Thinking**  
Charles Q. Choi, IEEE Spectrum  
 [Article](#)

Apr 2022 **Does this artificial intelligence think like a human?**  
Adam Zewe, MIT News  
 [Article](#)

## AWARDS & GRANTS

2025 **MIT Research Mentoring Certificate**  
Completed a 3-session mentoring workshop.

### NDIF 405B Pilot Program


Research project selected for access to Llama 405B through NDIF.  [Research Grant](#)

2024 **MIT Grant Writing Training Certificate**  
Completed a 4-session grant writing training program.

### Apple Scholars in AIML PhD Fellowship

Full graduate fellowship for the 2024–2026 academic years. ★ [PhD Fellowship](#)

2023 **ACL Outstanding Paper Award**

VisText received an Outstanding Paper award at ACL 2023.  [Paper Award](#)


2022 **MIT International Science and Technology Initiatives Research Grant**

Travel grant to collaborate with colleagues at the University of Konstanz.

### IEEE CIS Graduate Student Research Grant

Research grant to collaborate with colleagues at the University of Konstanz.


### CHI Best Paper Honorable Mention Award

Shared Interest received a Best Paper Honorable Mention award at CHI 2022.  [Paper Award](#)

### SIGCHI Gary Marsden Travel Award

Funding to attend the ACM Conference on Human Factors in Computing Systems (CHI) 2022.

### IUI Best Paper Honorable Mention Award

The Embedding Comparator received a Best Paper Honorable Mention award at IUI 2022.  [Paper Award](#)

2020 **MIT John W. Jarve (1978) Fellowship**

MIT full graduate fellowship for the 2020–2021 academic year. ★ [PhD Fellowship](#)

2016 **Palantir Women in Technology Scholarship**

Awarded \$5,000 based on academic and research excellence. Selected as one of ten finalists out of 3000 applicants.

### Johnson & Johnson Scholar

Awarded research funding for outstanding undergraduate research. Selected as one of 18 scholars from MIT's summer undergraduate researchers.

2015 **MIT International Science and Technology Initiatives Research Grant**

Travel grant to research medical applications of time-series modeling at Leiden University.

## TEACHING

Spring 2025 **6.C85[J]: Interactive Data Visualization and Society**

Guest Lecturer: Visualization + AI

Professors: [Catherine D'Ignazio](#) • [Crystal Lee](#) • [Arvind Satyanarayan](#)

Guest lectured on the role of visualization in understanding AI models and their behavior.

 [Slides](#)

Spring 2025 **CSCI 1302: Introduction to Sociotechnical Systems and HCI**

Guest Lecturer: AI Interpretability

Professors: [Harini Suresh](#) • [Diana Freed](#)

Developed and delivered a guest lecture on interpretability and how it shapes our relationship with AI systems.

 [Slides](#)

Spring 2020 **6.009: Fundamentals of Programming**

Graduate Teaching Assistant

Professors: [Ana Bell](#) • [Duane Boning](#) • [Max Goldman](#) • [Adam Hartz](#)

Taught fundamental programming concepts in Python to 400 students, in-person and remotely. Led a team of over 100 undergraduate TAs to conduct daily office hours.

Fall 2019 **6.009: Fundamentals of Programming**

Graduate Teaching Assistant

Professors: [Srini Devadas](#) • [Erik Demaine](#)

Developed new teaching materials, laboratory assignments, and exams for a course of 400 students. Delivered weekly recitations teaching fundamental programming concepts to a group of 30 students. Supervised weekly office hours.

# SERVICE

## Research Mentor

- Fa 2022–Sp 2025 [Hyemin Bang](#)  
MIT EECS MEng 2025 → MIT EECS PhD Student
- Summer 2024 [Helena Vasconcelos](#)  
Stanford University BS 2025 → Harvard University PhD Student
- Su 2023–Sp 2024 [Zoe De Simone](#)  
MIT EECS MSc 2024 → MIT EECS PhD Student
- Su 2023–Sp 2024 [Moulinrouge Kaspar](#)  
MIT EECS MEng 2024 → Business Analyst at McKinsey & Company
- Fa 2021–Sp 2023 [Benny J. Tang](#)  
MIT EECS MSc 2023 → Research Engineer at Meta

## Organizer

IEEE VIS Workshop of Visualization for AI Explainability (VISxAI) 2022, 2023, 2024, and 2025

## Program Committee

IEEE VIS Workshop of Visualization for AI Explainability (VISxAI) 2021

## Reviewer

Neural Information Processing Systems (NeurIPS) 2021, 2022, and 2024  
International Conference on Machine Learning (ICML) 2022, 2023, and 2024  
ACM Human Factors in Computing Systems (CHI) 2022, 2024, and 2025  
IEEE Transactions on Visualization & Computer Graphics (VIS) 2024 and 2025  
IEEE/CVF Computer Vision and Pattern Recognition Conference (CVPR) 2025  
IEEE Transactions on Visualization and Computer Graphics (TVCG) 2025  
ACM Symposium on User Interface Software and Technology (UIST) 2025

## Student Volunteer

IEEE Transactions on Visualization & Computer Graphics (VIS) 2024

## Member

Association for Computing Machinery (ACM)  
Institute of Electrical and Electronics Engineers (IEEE)

2019–Present **MIT Admissions**

Educational Counsellor  
Interview prospective undergraduate students on behalf of the Admissions Committee to provide additional context about the applicants and answer questions about MIT.