

## 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 interpret and visualize machine learning model behavior and uncertainty.

2018 – 2020 **Massachusetts Institute of Technology**

Research Assistant, Spoken Language Systems Group

Mentors: [Jim Glass](#) • [David Harwath](#)

Explored self-supervised machine learning methods 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 deep learning and regression 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](#)

Investigated decision tree models to predict a patient's blood transfusion need from clinical time-series data to assist ICU physicians in making patient-care decisions.

2015 – 2016 **Massachusetts Institute of Technology**

Undergraduate Researcher, Paul F. Glenn Center for Biology of Aging Research

Mentors: [Leonard P. Guarente](#) • [Christin Glorioso](#)

Designed statistical models and data visualizations to investigate correlations between gene expression and the onset of Alzheimer's Disease.

## INDUSTRY RESEARCH

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 and researchers evaluate, monitor, and improve their model compression strategies.

Summer 2022 **IBM Research**

Research Intern, Visual AI Lab

Mentor: [Hendrik Strobelt](#)

Researched 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 analyze, compare, and document saliency methods.
- 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](#) [🔗 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. Guttag • Arvind Satyanarayan  
ACM Conference on Fairness, Accountability, and Transparency (FAccT) 2023  
[🔗 Project](#) [📄 Paper](#) [📺 Video](#) [🔗 Repo](#) [📄 Press](#)
- 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 **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](#)
- 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](#)

## WORKSHOPS & DEMOS

- 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](#)  
2019  
[📄 Paper](#) [📋 Poster](#)

## TALKS & PANELS

### Compress and Compare

Oct 2024 IEEE Transactions on Visualization & Computer Graphics (VIS)  
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)  
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  
May 2022 ACM Human Factors in Computing Systems (CHI)  
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)  
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

2025 **NDIF 405B Pilot Program**  
Research project selected for access to Llama 405B through NDIF.

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.

- 2023 **ACL Outstanding Paper Award**  
VisText received an Outstanding Paper award at ACL 2023.
- 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.
- 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.
- 2020 **MIT John W. Jarve (1978) Fellowship**  
MIT full graduate fellowship for the 2020–2021 academic year.
- 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 \$5,280 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 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
- Summer 2024 [Helena Vasconcelos](#)  
Stanford University BS 2025
- 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 Scaled Cognition

### Organizer

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

### 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  
IEEE/CVF Computer Vision and Pattern Recognition Conference (CVPR) 2025  
IEEE Transactions on Visualization and Computer Graphics (TVCG) 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.

2015

**Academics for the Future of Science**

Founder and President

Founded an MIT student group focused on fundraising and publicity initiatives to promote government funding for science and technology. Created a web-based tool allowing citizens to easily write to congress expressing their concerns.