

Adam Coscia

HCC PhD Candidate @ Georgia Tech • Email: acoscia125@gmail.com • Website: <https://adamcoscia.com>

EDUCATION

Ph.D. in Human-Centered Computing

Georgia Institute of Technology

Atlanta, GA

Expected May 2026

Dissertation: **Visual Analytics for Trustworthy Large Language Models in Education**

Advisor: Dr. Alex Endert

Committee: Dr. Duen Horng (Polo) Chau, Dr. Cindy Bearfield-Xiong, Dr. Yalong Yang, Dr. Scott Crossley

B.S. in Physics

Stevens Institute of Technology

Hoboken, NJ

May 2020

Minors: **Mathematics, Computer Science**

Achievements: GPA: 3.98/4.00, Pinnacle Scholars program, Ranked 1st in physics class of 2020

RESEARCH EXPERIENCE

Georgia Institute of Technology

Graduate Research Assistant • *Visual Analytics Lab*

Atlanta, GA

2020—present

Advisor: **Alex Endert**

Developing interactive visual analytics tools that help people make sense of data by combining information visualization, machine learning, and human-computer interaction.

MIT Lincoln Laboratory

Artificial Intelligence Research Lead • *Artificial Intelligence Group*

Lexington, MA

Summer 2025

Advisors: **Ho Chit Siu, Rohan Paleja**

Developing novel visual analytics interfaces that enable human-in-the-loop decision-making and guidance in human-machine teaming scenarios.

Adobe Research

Machine Learning Research Lead • *AI Experiences Lab*

San Jose, CA

Summer 2024

Advisors: **Shunan Guo, Eunyee Koh**

Built a novel chat interface with large language models (LLMs) to improve sensemaking of conversational LLM responses for everyday users using LLM-powered Adobe products.

NASA Jet Propulsion Laboratory (JPL)

Machine Learning Research Lead • *Human-Interfaces Group*

Pasadena, CA

Summer 2023

Advisors: **Scott Davidoff, Tiago Vaquero**

Developed automated science planning capabilities for planetary missions to support multi-instrument and team-driven science using a novel demonstration paradigm.

NASA Jet Propulsion Laboratory (JPL)

Computer Science Lead • *Data to Discovery*

Pasadena, CA

Summer 2021

Advisors: **Scott Davidoff, Santiago Lombeyda, Hillary Mushkin, Maggie Hendrie**

Built interactive data visualization combining linked 2D maps and 3D visualizations of taxa and geochemical values in sediment cores collected from the sea floor.

Stevens Institute of Technology

Undergraduate Research Assistant • *School of Information Systems and Architecture*

Advisors: **Aron Lindberg**, **Amir Gandomi**

Developed statistical model in Python for connecting evolutionary trajectories of digital artifacts to performance outcomes in online communities.

Hoboken, NJ

2018—2020

Katholieke Universiteit Leuven

Visiting Research Scholar • *Department of Physics and Astronomy*

Advisors: **Lino da Costa Pereira**, **Tiago Abel de Lemos Lima**

Built data visualization interface in Python for managing simulations of ion channeling in single crystals, to be used in ion beam analysis of topological materials.

Leuven, Belgium

Summer 2017

INDUSTRY EXPERIENCE

New York Life Insurance Company

Machine Learning / Operations Intern • *Center for Data Science and Artificial Intelligence*

Supervisor: **Paul Janis**

Engineered multiple feature extraction pipelines interfaced by Domino platform and integrated with existing Hadoop infrastructure. Produced model monitoring metric reports for stakeholders and data science team.

New York, NY

Summer 2020

New York Life Insurance Company

Data Platform Engineering Intern • *Center for Data Science and Analytics (CDSA)*

Supervisor: **Paul Janis**

Built various scalable programs and data-handling procedures for multiple teams to leverage complex, low-level data lake tools with efficient, cost-effective, and easy-to-use interfaces.

New York, NY

Summer 2019

AWARDS and HONORS

Inducted into Sigma Xi Scientific Research Honor Society

Inducted as a lifetime member

2025

Best Poster Award, CRIDC 2025

For "Incorporating Knowledge Graphs and Large Language Models into Visual Text Analysis Tools"

2025

Foley Scholar Award Finalist (top 8), Georgia Tech

Awarded to top graduate students shaping the future of how people interact with and value technology.

2024

Best Poster Award, CRIDC 2023

For "KnowledgeVIS: Visualizing What Language Models Have Learned"

2023

Best Poster Award, CRIDC 2021

For "Lumos: Increasing Awareness of Biases during Visual Data Analysis"

2021

President's Fellowship, Georgia Tech

Four-year semesterly stipend award; selected upon admission from top 10% of applicant pool.

2020

Alfred M. Mayer Prize, Stevens Institute of Technology

Awarded to senior ranked first in all physics courses taken during undergraduate career.

2020

Inducted into Sigma Pi Sigma Physics Honor Society

Inducted as a lifetime member by the American Institute of Physics

2019

Distinguished Teaching Assistant, Stevens Institute of Technology

Awarded to student faculty member nominated for creating outstanding classroom environment.

2018

Presidential Scholarship, Stevens Institute of Technology

Four-year, half-tuition award; selected for academic excellence in high school.

2016

PUBLICATIONS

Journal Articles

1. KnowledgeVIS: Interpreting Language Models by Comparing Fill-in-the-Blank Prompts

Adam Coscia and Alex Endert

IEEE Trans. on Visualization and Computer Graphics (TVCG), 2024

2. Preliminary Guidelines for Combining Data Integration and Visual Data Analysis

Adam Coscia, Ashley Suh, Remco Chang, and Alex Endert

IEEE Trans. on Visualization and Computer Graphics (TVCG), 2024

Conference Proceedings

1. VisPile: A Visual Analytics System for Analyzing Multiple Text Documents with Large Language Models and Knowledge Graphs

Adam Coscia and Alex Endert

The 59th Hawaii International Conference on System Sciences (HICSS), Lahaina, Hawai'i, USA, 2026

2. OnGoal: Tracking and Visualizing Conversational Goals in Multi-Turn Dialogue with Large Language Models

Adam Coscia, Shunan Guo, Eunyee Koh, and Alex Endert

ACM Symposium on User Interface Software and Technology (UIST), Busan, Republic of Korea, 2025

3. Visualizing the Provenance of Intelligent Tutor Interactions towards Responsive Pedagogy

Grace Guo, Aishwarya Mudgal Sunil Kumar, Adit Gupta, Adam Coscia, Chris MacLellan, and Alex Endert

International Conference on Advanced Visual Interfaces (AVI), Arenzano (Genoa), Italy, 2024

4. DeepSee: Multidimensional Visualizations of Seabed Ecosystems

Adam Coscia, Haley M. Sapers, Noah Deutsch, Malika Khurana, John S. Magyar, Sergio A. Parra, Daniel R. Utter, Rebecca L. Wipfler, David W. Caress, Eric J. Martin, Jennifer B. Paduan, Maggie Hendrie, Santiago Lombeyda, Hillary Mushkin, Alex Endert, Scott Davidoff, and Victoria J. Orphan

ACM Conference on Human Factors in Computing Systems (CHI), Honolulu, Hawai'i, USA, 2024

5. iScore: Visual Analytics for Interpreting How Language Models Automatically Score Summaries

Adam Coscia, Langdon Holmes, Wesley Morris, Joon Suh Choi, Scott Crossley, and Alex Endert

ACM Conference on Intelligent User Interfaces (IUI), Greenville, South Carolina, USA, 2024

6. Lumos: Increasing Awareness of Analytic Behavior during Visual Data Analysis

Arpit Narechania, Adam Coscia, Emily Wall, and Alex Endert

IEEE Trans. on Visualization and Computer Graphics (Proc. IEEE VIS 2021), 2022

7. Left, Right, and Gender: Exploring Interaction Traces to Mitigate Human Biases

Emily Wall, Arpit Narechania, Adam Coscia, Jamal Paden, and Alex Endert

IEEE Trans. on Visualization and Computer Graphics (Proc. IEEE VIS 2021), 2022

Workshop Papers

1. LLM Prompt Design and Evaluation for Educational Applications

Langdon Holmes, Adam Coscia, Scott Crossley, Joon Suh Choi, and Wesley Morris

Workshop on Epistemics and Decision-Making in AI-Supported Education @ The 26th International Conference on Artificial Intelligence in Education (AIED), Palermo, Italy, 2025

2. **Toward a Bias-Aware Future for Mixed-Initiative Visual Analytics**

Adam Coscia, Duen Horng (Polo) Chau, and Alex Endert
Workshop on TRust and EXpertise in Visual Analytics @ IEEE VIS 2020

Posters

1. **Incorporating Knowledge Graphs and Large Language Models into Visual Text Analysis Tools**

Adam Coscia, Alex Endert, Liz Richerson, Sue Mi K., Stephen S., and Tim S.
a. *Career, Research, and Innovation Development Conference (CRIDC), Atlanta, GA, USA, 2025. **Best Poster Award (top 5%)***
b. *2024 LAS Research Symposium, Raleigh, NC, USA, 2024.*

2. **iScore: Visual Analytics for Interpreting How Language Models Automatically Score Summaries**

Adam Coscia, Langdon Holmes, Wesley Morris, Joon Suh Choi, Scott Crossley, and Alex Endert
a. *Career, Research, and Innovation Development Conference (CRIDC), Atlanta, GA, USA, 2024*
b. *C21U Symposium on Generative Futures: Revolutionizing Learning with Artificial Intelligence, Atlanta, GA, USA, 2023*

3. **KnowledgeVIS: Visualizing What Language Models Have Learned**

Adam Coscia and Alex Endert
*Career, Research, and Innovation Development Conference (CRIDC), Atlanta, GA, USA, 2023. **Best Poster Award (top 5%)***

4. **Lumos: Increasing Awareness of Biases during Visual Data Analysis**

Arpit Narechania, Adam Coscia, Emily Wall, and Alex Endert
*Career, Research, and Innovation Development Conference (CRIDC), Atlanta, GA, USA, 2021. **Best Poster Award (top 5%)***

5. **Correlating Long-Term Innovation with Success in Career Progression**

Adam Coscia and Aron Lindberg
a. *Business Intelligence & Analytics (BI&A) Corporate Networking Event, Hoboken, NJ, USA, 2018*
b. *Pinnacle Scholar Summer Research Poster Session, Hoboken, NJ, USA, 2018*

INVITED TALKS and DEMOS

Integrating AI into Visual Analytics

Brown Visual Computing Seminar, <i>Brown University</i>	October 2025
<i>University of Massachusetts Boston</i>	October 2025
<i>University of Massachusetts Amherst</i>	October 2025
<i>Johns Hopkins University</i>	October 2025
<i>MIT Lincoln Laboratory</i>	July 2025

Visual Analytics for Trustworthy Large Language Models in Education

<i>Tufts University</i>	July 2025
<i>Institute for People and Technology (IPAT), Georgia Institute of Technology</i>	April 2025
<i>NSF AI Institute AI-ALOE Showcase, Georgia Institute of Technology</i>	April 2024

KnowledgeVIS: Interpreting Language Models by Comparing Fill-in-the-Blank Prompts

<i>Invited Journal Paper Talk, IEEE Visualization Conference (VIS)</i>	October 2024
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Preliminary Guidelines for Combining Data Integration and Visual Data Analysis

<i>Invited Journal Paper Talk, IEEE Visualization Conference (VIS)</i>	October 2024
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Visualizing What Large Language Models Have Learned

GVU Demo Day, Georgia Institute of Technology

March 2023

TEACHING

Georgia Institute of Technology

Graduate Teaching Assistant • CS 6730: Data Visualization Principles

Instructor: **Alex Endert**

Assisted professor with lectures, grading, team projects; held office hours for student support.

Atlanta, GA

Fall 2022, Fall 2025

Stevens Institute of Technology

Course Assistant • PEP 112S: Honors Electricity & Magnetism

Instructor: **Christopher Search**

Assisted professor with grading, reviews, worksheets, and testing material preparation.

Hoboken, NJ

semesterly, 2018—2020

Stevens Institute of Technology

Course Assistant • PEP 112: Electricity & Magnetism

Instructor: **Robert Pastore**

Ran exam reviews each semester for an average class size of 200 students.

Hoboken, NJ

semesterly, 2018—2020

Stevens Institute of Technology

Teaching Assistant • CS 105: Intro to Scientific Computing

Instructor: **Dimitrios Damopoulos**

Instructed 15-25 students weekly via in-person labs using MATLAB assignments designed to teach basic scientific computing paradigms. Developed course material with instructor.

Hoboken, NJ

semesterly, 2017—2020

MENTORSHIP

Research

Sujata Duwal

Ph.D. in Human-Centered Computing, Georgia Institute of Technology

Studying trust in decision-making when visualizing LLMs used in education.

2025

Jennifer Chandran

M.S. in Human-Computer Interaction, Georgia Institute of Technology

Creating a new LLM-augmented pipeline that automatically transforms document sets for data analysis.

2025

Ben Klassen

M.S. in Data Science & Analytics, Georgia Institute of Technology

Developed new data science tools that leverage LLMs to enhance intelligence in classrooms and sports analytics.

2024—2025

Sean Ru

M.S. in Computer Science, Georgia Institute of Technology

Created LLM-based algorithms that embed data visualizations for improved searchability.

2024

Programs & Outreach

Georgia Institute of Technology

Mentor • IC Buddies Mentorship Program

Paired one-on-one with a graduate student, helping them adjust to grad school. Introduced them to faculty connections, discussed graduate research opportunities, and provided guidance on time/workload management.

Atlanta, GA

2025

Encouraging Women Across All Borders (EWAAB)

Mentor • *Beyond Mentorship Program*

Connected monthly one-on-one with students to discuss professional topics ranging from general professional advice, to applying for job opportunities, to discovering new fields of study.

New York, NY

2022—2023

Stevens Institute of Technology

Mentor • *Pinnacle Scholar Peer Advisor Program*

Mentored 4-6 honors freshman each academic year representing different majors. Provided guidance on internships, classes, international experiences, campus resources. Took students on excursions into Hoboken.

Hoboken, NJ

2017—2019

GRANTS and FUNDING

Enabling Continuous Analytic Dialogues in Visual Analytics with LLMs and Knowledge Graphs

2025

Laboratory for Analytic Sciences, *North Carolina State University*

Co-PI: **Alex Endert**

One-year funding (full tuition + graduate stipend)

Incorporating Knowledge Graphs and Large Language Models into Visual Text Analysis Tools

2024

Laboratory for Analytic Sciences, *North Carolina State University*

Co-PI: **Alex Endert**

One-year funding (full tuition + graduate stipend)

Correlating Long-Term Innovation with Success in Career Progression

2018

Pinnacle Scholar Summer Institutional Research Program, *Stevens Institute of Technology*

Co-PI: **Aron Lindberg**

Funded \$5000 for research expenses and living stipend

Managing Simulations of Ion Channeling in Single Crystals

2017

International Summer Abroad Internship Program, *Katholieke Universiteit Leuven*

Co-PI: **Lino da Costa Pereira**

Funded €3000 from Katholieke Universiteit Leuven and \$5000 from Stevens Institute of Technology

SERVICE and ASSOCIATIONS

Professional Societies

Member, Sigma Xi Scientific Research Honor Society (**Sigma Xi**)

since 2025

Member, IEEE Computer Society (**IEEE**)

since 2025

Member, Association for Computing Machinery (**ACM**)

since 2023

Member, Special Interest Group on Computer-Human Interaction (**SIGCHI**)

since 2023

Member, Sigma Pi Sigma (**SPS**) Physics Honor Society

Lifetime, since 2019

Member, American Physical Society (**APS**)

2016—2020

Program Committee

IEEE Pacific Visualization Conference (**PacificVis**) Short Papers

2025

ACM Conference on Intelligent User Interfaces (**IUI**) Full Papers

2025

Reviewer

IEEE Visualization Conference (**VIS**)

2022—2025

IEEE Pacific Visualization Conference (**PacificVis**)

2025

IEEE Transactions on Visualization and Graphics (**TVCG**)

2022, 2025

EuroVis Conference (EuroVis)	2023—2025
ACM Conference on Human Factors in Computing Systems (CHI)	2024—2025
ACM Conference on Computer-Supported Cooperative Work & Social Computing (CSCW)	2025
ACM Symposium on User Interface Software and Technology (UIST)	2025
ACM Transactions on Interactive Intelligent Systems (TIIS)	2024
Computers and Graphics (C&G)	2025
Visual Informatics	2025

Special recognition for exceptional reviews

- IEEE VIS 2023
- ACM CHI 2024, 2025

Conference Student Volunteer

ACM Symposium on User Interface Software and Technology (UIST)	2025
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PRESS

1. CRIDC 2025 Awards \$40,000 to competition winners

Brittani Hill, Georgia Tech Office of Graduate and Postdoctoral Education, February 2025
<https://grad.gatech.edu/news/cridc-2025-awards-40000-competition-winners>

2. Foley Scholars 2024 Winners and Finalists

Walter Rich, Georgia Tech Office of Research, November 2024
<https://research.gatech.edu/foley-scholars-2024-winners-and-finalists>

3. Visualization Tool Helps Oceanographers Predict Sediment Sample Hotspots

Nathan Deen, Georgia Tech School of Interactive Computing, July 2024
<https://www.cc.gatech.edu/news/visualization-tool-helps-oceanographers-predict-sediment-sample-hotspots>

4. Adam Coscia Presents Visualizations for Interpreting Large Language Models at GVU Center Research Showcase

NSF AI Institute for Adult Learning in Online Education (AI-ALOE), April 2023
<https://aialoe.org/coscia-presents-visualizations-for-interpreting-large-language-models/>

5. DeepSEE: A Virtual Window Under the Waves

Serg Parra, Schmidt Ocean Institute, November 2021
<https://schmidtoccean.org/cruise-log-post/deepsee-a-virtual-window-under-the-waves/>