Adam J. Coscia – Curriculum Vitae

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EDUCATION

Ph.D. in Human-Centered Computing — Atlanta, GA
Georgia Institute of Technology ● Advised by **Alex Endert** ● GPA: 4.00 / 4.00 — Expected May 2026

B.S. in Physics — Hoboken, NJ
Stevens Institute of Technology ● Minors: Mathematics, Computer Science ● GPA: 3.98 / 4. 00 — May 2020

RESEARCH EXPERIENCE

Georgia Institute of Technology — Atlanta, GA
Graduate Research Assistant ● Advisor: **Alex Endert** — 2020—present
- Developing interactive visual analytics tools that help people make sense of data by combining information visualization, machine learning, data mining, and human-computer interaction.
- Member of the Visual Analytics Lab.

Adobe Research — San Jose, CA
Machine Learning Research Lead ● Advisors: **Shunan Guo**, **Eunyee Koh** — Summer 2024
- Building novel in-situ visualizations that enable real-time sensemaking of conversations with large language models (LLMs) to improve understanding of conversational LLM responses for everyday users engaging with Adobe products.

NASA Jet Propulsion Laboratory (JPL) — Pasadena, CA
Machine Learning Research Lead ● Advisor: **Scott Davidoff** — Summer 2023
- Developed automated science planning capabilities for planetary mission plans to support multi-instrument and team-driven science using a novel demonstration paradigm.
- Joint work between NASA Jet Propulsion Laboratory and Georgia Tech.

Computer Science Lead ● Primary Advisor: **Scott Davidoff** — Summer 2021
- Built interactive data visualization combining linked 2D maps and 3D visualizations of taxa and geochemical values in sediment cores collected from the sea floor.
- Joint work between NASA Jet Propulsion Laboratory, Caltech, and the ArtCenter College of Design.

Stevens Institute of Technology — Hoboken, NJ
Research Assistant ● Advisors: **Aron Lindberg**, **Amir Gandomi** — 2018—2020
- Developed statistical model in Python for connecting evolutionary trajectories of digital artifacts to performance outcomes in online communities.

Katholieke Universiteit Leuven — Leuven, Belgium
Visiting Research Scholar ● Advisors: **Lino da Costa Pereira**, **Tiago Abel de Lemos Lima** — Summer 2017
- 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.

INDUSTRY EXPERIENCE

New York Life Insurance Company — New York, NY

Machine Learning / Operations Intern ● Supervisor: **Paul Janis** — Summer 2020

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

Data Platform Engineering Intern ● Supervisor: **Paul Janis** — Summer 2019

- 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.

AWARDS and HONORS

College of Computing (CoC) Poster Award, **Georgia Institute of Technology** — 2023

- CRIDC Poster Competition winner: "KnowledgeVIS: Visualizing What Language Models Have Learned."

Executive Vice President for Research (EVPR) Poster Award, **Georgia Institute of Technology** — 2021

- CRIDC Poster Competition winner: "Lumos: Increasing Awareness of Biases during Visual Data Analysis."

President's Fellowship, **Georgia Institute of Technology** — 2020

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

Alfred M. Mayer Prize, **Stevens Institute of Technology** — 2020

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

Sigma Pi Sigma Physics Honor Society, **American Institute of Physics** — 2019

- Inducted as a Lifetime Member.

Distinguished Teaching Assistant, **Stevens Institute of Technology** — 2018

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

Presidential Scholarship, **Stevens Institute of Technology** — 2016

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

PUBLICATIONS and PRESENTATIONS

Conference Proceedings and Journal Articles

1. Grace Guo, Aishwarya Mudgal Sunil Kumar, Adit Gupta, Adam Coscia, Chris MacLellan, and Alex Endert. **Visualizing the Provenance of Intelligent Tutor Interactions towards Responsive Pedagogy.** *International Conference on Advanced Visual Interfaces (AVI), 2024.*
2. 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. **DeepSee: Multidimensional Visualizations of Seabed Ecosystems.** *ACM Conference on Human Factors in Computing Systems (CHI), 2024.*
3. Adam Coscia, Langdon Holmes, Wesley Morris, Joon Suh Choi, Scott Crossley, and Alex Endert. **iScore: Visual Analytics for Interpreting How Language Models Automatically Score Summaries.** *ACM Conference on Intelligent User Interfaces (IUI), 2024.*
4. Adam Coscia and Alex Endert. **KnowledgeVIS: Interpreting Language Models by Comparing Fill-in-the-Blank Prompts.** *IEEE Transactions on Visualization and Computer Graphics (TVCG), 2023.*
5. Adam Coscia, Ashley Suh, Remco Chang, and Alex Endert. **Preliminary Guidelines for Combining Data Integration and Visual Data Analysis.** *IEEE Transactions on Visualization and Computer Graphics (TVCG), 2023.*

6. Arpit Narechania, Adam Coscia, Emily Wall, and Alex Endert. **Lumos: Increasing Awareness of Analytic Behavior during Visual Data Analysis**. *IEEE Transactions on Visualization and Computer Graphics (TVCG), 2022. Proceedings of IEEE VIS, 2021.*
7. Emily Wall, Arpit Narechania, Adam Coscia, Jamal Paden, and Alex Endert. **Left, Right, and Gender: Exploring Interaction Traces to Mitigate Human Biases.** *IEEE Transactions on Visualization and Computer Graphics (TVCG), 2022. Proceedings of IEEE VIS, 2021.*

Workshop Papers

1. Adam Coscia, Duen Horng (Polo) Chau, and Alex Endert. **Toward a Bias-Aware Future for Mixed-Initiative Visual Analytics.** *Workshop on TRust and EXpertise in Visual Analytics (TREX) at IEEE VIS, 2020.*

Posters

1. Adam Coscia, Langdon Holmes, Wesley Morris, Joon Suh Choi, Scott Crossley, and Alex Endert. **iScore: Visual Analytics for Interpreting How Language Models Automatically Score Summaries.** *Career, Research, and Innovation Development Conference (CRIDC), Atlanta, GA, Feb 2024.*
2. Adam Coscia, Langdon Holmes, Wesley Morris, Joon Suh Choi, Scott Crossley, and Alex Endert. **iScore: Visual Analytics for Interpreting How Language Models Automatically Score Summaries.** *C21U Annual Symposium on Generative Futures: Revolutionizing Learning with Artificial Intelligence, Atlanta, GA, Sep 2023.*
3. Adam Coscia and Alex Endert. **KnowledgeVIS: Visualizing What Language Models Have Learned.** *Career, Research, and Innovation Development Conference (CRIDC), Atlanta, GA, Feb 2023.*
4. Arpit Narechania, Adam Coscia, Emily Wall, and Alex Endert. **Lumos: Increasing Awareness of Biases during Visual Data Analysis.** *Career, Research, and Innovation Development Conference (CRIDC), Atlanta, GA, Feb 2021.*
5. Adam Coscia. **Correlating Long-Term Innovation with Success in Career Progression.** *Business Intelligence & Analytics (BI&A) Corporate Networking Event, Hoboken, NJ, Nov 2018.*
6. Adam Coscia. **Correlating Long-Term Innovation with Success in Career Progression.** *Pinnacle Scholar Summer Research Poster Session, Hoboken, NJ, Nov 2018.*

TEACHING and MENTORING

Georgia Institute of Technology — Atlanta, GA

Graduate Teaching Assistant ● Data Visualization Principles (CS 6730) ● Instructor: **Alex Endert** — Fall 2022
- Assisted professor with grading, reviews, worksheets, and testing material preparation.

Stevens Institute of Technology — Hoboken, NJ

Course Assistant ● Honors Electricity & Magnetism (PEP 112) ● Instructor: **Christopher Search** — 2018—2020
- Assisted professor with grading, reviews, worksheets, and testing material preparation.

Course Assistant ● Electricity & Magnetism (PEP 112) ● Instructor: **Robert Pastore** — 2018—2020
- Ran exam reviews each semester for an average class size of 200 students.

Teaching Assistant ● Intro to Scientific Computing (CS 105) ● Instructor: **Dimitrios Damopoulos** — 2017—2020
- Instructed 15-25 students weekly via in-person labs using MATLAB assignments designed to teach basic scientific computing paradigms. Developed course material with instructor supervision.

Mentor ● Pinnacle Scholar Peer Advisor Program — 2017—2019
- Mentored 4-6 Pinnacle Scholar freshman representing different majors each academic year. Provided guidance on internships, classes, international experiences, campus resources. Took students on excursions into Hoboken.

GRANTS and FUNDING

Georgia Institute of Technology — Atlanta, GA

Partnership with North Carolina State University's (NCSU) Laboratory for Analytic Sciences (LAS) — 2024

- One-year funding (full tuition + stipend) from *NCSU LAS*

Stevens Institute of Technology — Hoboken, NJ

Pinnacle Scholar Summer Institutional Research Program — Summer 2018

- $5000 stipend from *Stevens Institute of Technology*

International Summer Abroad Internship Program — Summer 2017

- €3000 stipend, Department of Physics and Astronomy, *Katholieke Universiteit Leuven*
- $5000 stipend, Pinnacle Scholars Program, *Stevens Institute of Technology*

SERVICE and ASSOCIATIONS

Reviewer

IEEE VIS Conference (**VIS**)	2022, 2023, 2024
IEEE Transactions on Visualization and Graphics (**TVCG**)	2022
EuroVis Conference (**EuroVis**)	2023, 2024
ACM Conference on Human Factors in Computing Systems (**CHI**)	2024
ACM Transactions on Interactive Intelligent Systems (**TIIS**)	2024

Member

ACM + **SIGCHI** Member	2023—present
Sigma Pi Sigma (**SPS**) Physics Honor Society	2019—present
American Physical Society (**APS**)	2016—2020

COMMUNITY ENGAGEMENT

Encouraging Women Across All Borders (EWAAB) — New York, NY

Mentor ● **Beyond Mentorship Program** — Fall 2022

- Connect one-on-one with students to discuss professional topics ranging from general professional advice, to applying for opportunities, to discovering new fields.

Stevens Institute of Technology — Hoboken, NJ

Co-panelist ● **Panel: "Applying to Ph.D. Programs"** — Fall 2020

- Shared Ph.D. application experiences with undergraduate Stevens' Pinnacle and Clark Scholars.

Treasurer ● **Society of Physics Students** ● Supervisor: **Edward Whittaker** — 2017—2020

- Requested and defended semesterly budget between $2000 and $5000 .
- Planned lectures, research colloquiums, scheduling events for physics majors.
- Led organization outreach programs in the Hoboken Grade Schools, both on and off-campus.

SKILLS and TECHNIQUES

Data Visualization

- **Tools** Java/TypeScript, Python, R, Tableau, MATLAB
- **Libraries** D3.js, Three.js, matplotlib, seaborn, ggplot2

Machine Learning (ML) / Modeling

- **Tools** Python, R
- **Libraries** pandas, NumPy, SciPy, scikit-learn, py-torch, transformers

Web Development

- **Tools** Vue.js, React, Angular, Node.js
- **Libraries** jQuery, Bootstrap, D3.js, Socket.IO / Express / Axios

Data Acquisition and Warehousing

- **Tools** SQL, Python, Apache Hive / Hadoop / Spark, Oracle, Redis, AWS S3
- **Libraries** Scrapy, BeautifulSoup

Other

- **Tools** Git, Jupyter Notebook, Visual Studio Code, Java, C/C++

RELEVANT COURSEWORK

Georgia Institute of Technology — Atlanta, GA

Human-Computer Interaction

- Principles of User Interface Software *(CS 6456)*
- Qualitative Methods for Design of Human Computer Interaction *(CS 6456)*
- Information Visualization *(CS 7450)*

Cognitive Science

- Introduction to Cognitive Science *(CS 6795)*

Stevens Institute of Technology — Hoboken, NJ

Computer Science

- Discrete Mathematics *(CS 135)*
- Data Structures *(CS 284)*
- Algorithms *(CS 385)*
- Creative Problem Solving and Team Programming *(CS 370)*
- Database Management Systems *(CS 442)*

Mathematics

- Differential Equations *(MA 221)*
- Multivariable Calculus *(MA 227)*
- Linear Algebra *(MA 232)*
- Advanced Calculus (Real Analysis) *(MA 547)*

Statistics

- Probability and Statistics *(MA 222)*
- Intermediate Statistics (*MA 331)*

Math Methods / Applications

- Mathematical Methods for Physicists I & II (Tensors, Fluids, Dynamics) *(PEP 527 & 528)*
- Computational Physics (Numerical Methods, Machine Learning) *(PEP 520)*