Adam J. Coscia – Curriculum Vitae

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EDUCATION

Ph.D. in Human-Centered Computing *Georgia Institute of Technology* — Atlanta, GA
GPA: **4.00 / 4.00** | Advisor: **Alex Endert** — Expected 2024

B.S. in Physics *Stevens Institute of Technology* — Hoboken, NJ
GPA: **3.98 / 4.00** | Minors: **Mathematics**, **Computer Science** — 2020

RESEARCH EXPERIENCE

Georgia Institute of Technology — Atlanta, GA
Graduate Research Assistant | Advised by **Alex Endert** — 2020—present

- Authored short paper discussing open opportunities and challenges surrounding bias awareness in mixed-initiative visual analytic systems. Presented at *TREX, IEEE VIS'20*.
- Co-developing novel visual analytics system to detect and raise awareness of cognitive bias in users, to be used in user study investigating effects on decision-making.
- Co-designing Mechanical Turk user study to investigate the impact of cognitive bias awareness and mitigation on the visual analytic process.
- **Funded** in part by *National Science Foundation grant IIS-1813281*.

Stevens Institute of Technology — Hoboken, NJ
Undergraduate Research Assistant | Advised by **Aron Lindberg**, **Amir Gandomi** — 2018—2020

- Developed statistical model in Python for connecting evolutionary trajectories of digital artifacts to performance outcomes in online communities.
- **Funded** by *Stevens Pinnacle Scholars Program*.

Katholieke Universiteit Leuven — Leuven, Belgium
Undergraduate Research Internship | Advised by **Lino da Costa Pereira**, **Tiago de Lemos Lima** — 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.
- **Funded** by *Katholieke Universiteit Leuven* and by *Stevens Pinnacle Scholars Program*.

INDUSTRY EXPERIENCE

New York Life Insurance Company — New York, NY
Machine Learning / Operations Intern | Supervised by **Paul Janis** — 2020

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

Data Platform Engineering Intern | Supervised by **Paul Janis** — 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

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

- Yearly stipend renewable for 3 additional terms; selected upon admission from top 10% of applicant pool.

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

- Cash prize 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—2020
- Four-year, half-tuition award; selected for academic excellence in high school.

PUBLICATIONS

Workshop

1. **Coscia, A.**, Chau, D., Endert, A. *Toward a Bias-Aware Future for Mixed-Initiative Visual Analytics.* Workshop on TRust and EXpertise in Visual Analytics (TREX, at VIS'20), 2020.

PRESENTATIONS

Poster

1. **Coscia, A.** *Correlating Long-Term Innovation with Success in Career Progression*, Business Intelligence & Analytics (BI&A) Corporate Networking Event, Hoboken, NJ, November 2018.
2. **Coscia, A.** *Correlating Long-Term Innovation with Success in Career Progression*, Pinnacle Scholar Summer Research Poster Session, Hoboken, NJ, November 2018.

TEACHING and MENTORING

Stevens Institute of Technology Hoboken, NJ

Course Assistant, Honors Electricity & Magnetism | Supervised by **Christopher Search** 2018—2020
- Assisted professor with grading, exam reviews, in-class worksheets, and testing material preparation.

Course Assistant, Electricity & Magnetism | Supervised by **Robert Pastore** 2018—2020
- Assisted lecturer by running exam reviews each semester for an average class size of 200 students.

Teaching Assistant, Introduction to Scientific Computing | Supervised by **Dimitrios Damopoulos** 2017—2020
- Instructed 15-25 students each semester in weekly 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 | Advised by **Stephanie Riker** 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.

COMMUNITY INVOLVEMENT

Stevens Institute of Technology Hoboken, NJ

Co-panelist, "Applying to Ph.D. Programs" | Organized by **Alida McKee** Sep 2020
- Shared Ph.D. application experiences with undergraduate Stevens' Pinnacle and Clark Scholars. Co-panelist with Kaitlin Gili, PhD in Physics, Oxford University, starting Jan. 2021.

Treasurer, Society of Physics Students | Advised by **Edward Whittaker** 2017—2020
- Responsible for requesting/defending semesterly budget between $2000 and $5000 as well as planning lectures, research colloquiums, scheduling events for physics majors, and organization-led outreach programs in the Hoboken Grade Schools both on and off-campus.

PROFESSIONAL ASSOCIATIONS

Sigma Pi Sigma Physics Honor Society *Lifetime Member* 2019

American Physical Society *General Member* 2016

GRANTS and FUNDING

Pinnacle Scholar Summer Institutional Research Program May—Aug 2018

- $5000 stipend from *Stevens Institute of Technology*

International Summer Abroad Internship Program May—Aug 2017

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

SKILLS and TECHNIQUES

Data Visualization

- Tableau, HTML/CSS, Java/TypeScript *(D3.js)*, Python *(matplotlib, seaborn)*, R *(ggplot2)*

Data Acquisition

- Python *(Scrapy, BeautifulSoup)*, ETL Pipelines *(PySpark/HDFS/Hive, Oracle/Java)*

Data Analysis

- Python *(pandas, NumPy, SciPy, scikit-learn)* R, MATLAB

Data Warehousing

- SQL, Apache Spark *(PySpark)*, Hive *(HiveQL)*, Hadoop *(HDFS)*

Development Tools

- Git, Jupyter Notebook, Visual Studio Code

Other Languages and **Frameworks**

- Java, C/C++, AngularJS, Node.js, jQuery

Numerical Methods

- Interpolation, polynomial approximation, integration, differentiation, solving IVPs, direct and iterative methods of solving linear and non-linear systems of equations in MATLAB

RELEVANT COURSEWORK

Visualization

- Information Visualization

Computer Science

- Discrete Structures, Data Structures, Algorithms, Creative Problem Solving and Team Programming, Database Management Systems

Mathematics

- Differential Equations, Multivariable Calculus, Linear Algebra, Advanced Calculus (Real Analysis)

Statistics

- Probability and Statistics, Intermediate Statistics

Math Methods / Applications

- Math Methods for Physicists I & II, Thermal & Statistical Physics, Computational Physics (Numerical Methods + Machine Learning)

Physics

- Mechanics, Electromagnetism, Quantum Mechanics I & II, Solid State Physics, Physics of Biological Systems