

Amiri Hayes

Mathematics Researcher + Software Engineer

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EDUCATION:

New Jersey Institute of Technology

B.S. Applied Math & M.S. Artificial Intelligence

Honors Student | Full Merit Scholarship in BS/MS Program

Sep 2023 - May 2026

Grade: 3.90/4

Rowan College of South Jersey - Gloucester

A.S. Physics, A.S. Mathematics, A.S. Computer Science

Homeschooled High School Student | Triple Major

Sep 2021 - May 2023

Grade: 3.95/4

WORK EXPERIENCE:

United Parcel Service, Business Rule Engine

NYC Metro

SOFTWARE ENGINEERING CO-OP, NOV 2023 - APR 2024

- Collaborated with many developers in globally distributed team executing UPS business rules in Java and Eclipse
- Wrote code utilizing a decision governance framework to outline & test business rules before moving to production
- Engaged in continual improvement initiatives by participating in code reviews & documenting rule specifications

RESEARCH EXPERIENCE:

Institute for Pure & Applied Mathematics, UCLA

Los Angeles, CA

STUDENT RESEARCHER, JUN 2024 - AUG 2024

[Preprint](#)

- Directed team as project manager in executing a nine-week research project at UCLA for industry sponsor RAND
- Applied generative machine learning techniques to create realistic graph datasets for epidemiological simulations
- Conducted research in network fusion, merging social networks and imputing data to estimate vaccination rates

Center for Applied Mathematics & Statistics, NJIT

Newark, NJ

STUDENT RESEARCHER, SEP 2022 - JAN 2024

[Preprint](#)

- Submitted independent research rating transportation mode viabilities for any U.S. city in Python for publication
- Implemented data collection pipeline & custom mathematical model, educated myself on ML for frequency data
- Related Certifications: Stanford Deep Learning Specialization, Google Data Analytics, AWS Cloud Practitioner

Governor's School Of Engineering & Technology, Rutgers

New Brunswick, NJ

STUDENT RESEARCHER, JUN 2022 - AUG 2022

[Publication](#)

- Completed four-week research project at Rutgers University proving the efficiency of amorphous aircraft design
- Developed scripts in MATLAB for data collection and to calculate fuel efficiency and aerodynamic coefficients
- Accepted to MIT and Rutgers symposiums to present research and demonstrate our prototype and simulations

SELECTED PROJECTS:

github.com/AmiriHayes

Cash Flow Coalition | www.cashflowinvesting.net

AWS / HTML / CSS / Javascript

Homepage for CFCIC, the Investment Club I co-founded. Allows members to login to see their investing information.

Aspire 4 Transport | www.aspire4transport.org

Python / PyTorch / React / Postgres / Express

ML project that automates collecting information and uses deep learning to rate transportation methods for US cities.

Hayes Quotes | www.hayesquotes.net

MongoDB / Express / React / NodeJS

Website that allows friends and family to share their favorite quotes online easily and securely.

SKILLS:

Languages (Python, Javascript, C++, SQL, R, Java)

Frameworks (React, Node, Express, Django, Flutter)

Database (AWS & GCP, Spark, BigQuery, MongoDB)

Machine Learning (Tensorflow, Pandas, Numpy)