# **Jeffrey Cole**

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### **EDUCATION**

## University of Maryland, College Park, MD

Bachelor of Science, Computer Science

GPA: 4.0

- Awards: Dean's List
- Coursework: Object-Oriented Programming, Calculus 1-3, Discrete Structures, Organization of Programming Languages, Algorithms, Physics, Machine Learning, Data Science, Statistics
- Organizations: AI/ML Club (Member), Quantum Club (Member)

### **SKILLS**

Languages & Tools: Java, C, C++, Assembly, R, MatLab, Unix, Python, Git, AWS, Pandas, NumPy, SciPy

Data Structures: Stacks, Queues, Linked Lists, Trees, Graphs, Hash Tables, Heaps

Algorithms: Sorting, Searching, Dynamic Programming, Greedy Algorithms, Dijkstra's Algorithm

## WORK EXPERIENCE

# **University of Maryland**

August 2025 - Present

**Anticipated Graduation: May 2026** 

Undergraduate Research Assistant

- Investigating the integration of Large Language Models (LLMs) with the Finite Expression Method (FEX) to symbolically discover relationships in partial differential equations (PDEs).
- Curating and analyzing code/data pipelines for symbolic PDE representations and operator prediction.
- Translating technical research into presentations for teams in mathematics and computer science.

# University of Maryland

January 2025 - Present

Teaching Assistant

- Read and provide detailed feedback on class materials(projects, exams, etc) before they are released.
- Lead discussion sections of 60+ students, teaching C, Assembly, and Unix.
- Mentor students and build students' confidence through one-on-one weekly office hours.
- Provide feedback on projects and exams for 200+ students.

# Applied Research Lab for Intelligence and Security

May 2024 - August 2024

RISC Intern

- Collaborated with interdisciplinary, cross functional teams to address real-world intelligence challenges through workshops, lectures, and weekly meetings.
- Conducted in-depth research on malicious cyber actor operations and attack techniques, leveraging books, papers, and information in MITRE frameworks to ensure compliance with security best practices.
- Synthesized information from academic papers and industry reports to support findings.
- Discussed project outcomes with peers and visiting experts from DOD/IC.

## **PROJECTS**

ProfPredict March 2025 - May 2025

- Developed a machine learning model to predict professor ratings using data from Planet Terp.
- Applied sentiment analysis to review text to extract opinion-based features and enhance model predictions.
- Trained and evaluated multiple regression models to identify the best-performing algorithm.

#### ThinkBit

February 2025 - March 2025

- Analyzed survey data from hundreds of computer science students at University of Maryland using Pandas, NumPy, and SciPy to determine patterns across students.
- Conducted statistical testing to evaluate responses and developed a reproducible pipeline for future studies.
- Discovered trends between priming questions, year in school, and gender role in questions.

# **CERTIFICATIONS**

## AWS Certified Cloud Practitioner (Udemy Prep)

Summer 2025

- Gained foundational AWS knowledge in services, architecture, and security.
- Applied cloud concepts to real-world scenarios through hands-on exercises.

## **CodePath Technical Interview Prep**

Summer 2025

- Applied core data structures and algorithms to solve technical challenges.
- Enhanced problem-solving and testing skills through mentor feedback.

### **EXTRACURRICULAR**

### Founder & President, NextGen

May 2025 - Present

• Built and direct campus chapter focused on youth mentorship and service initiatives.