

# Jude Lwin

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## Education

### University of Maryland, College Park

GPA: 3.95/4.00

*Bachelor of Science, Computer Science and Mathematics, Minor: Computational Finance*

*May 2027*

- Advanced Algorithms, Advanced Data Structures, Computer Systems, Databases, Object-Oriented Programming, Discrete Mathematics, Linear Algebra, Applied Probability and Statistics, Linear Optimization, Advanced Calculus I
- **Awards:** CS Departmental Honors, Design Cultures & Creativity Honors College (DCC), Dean's Scholarship

## Technical Skills

**Languages:** Python, Java, C, TypeScript, JavaScript, Rust, OCaml, SQL, R

**Frameworks & Libraries:** React, Node.js, Express, Flask, Firebase, Pandas, Scikit-Learn, TensorFlow, PyTorch

**Technologies & Tools:** Git, Snowflake, PostgreSQL, MongoDB, AWS, Docker, REST APIs, Linux, Unix, CI/CD, JIRA

## Experience

### Capital One

McLean, VA

*Software Engineer Intern*

*May. 2025 – Aug. 2025*

- Built an automated LLM evaluation pipeline in **Python** and **Docker** for **Agent Assist**, Capital One's first GenAI product, reducing manual review by **80%** and enabling **5K+** daily validations with **< 500ms** per-sample latency
- Trained a supporting classifier to differentiate outputs from successive LLM versions, enabling automated regression testing and version tracking across model updates
- Integrated **ROUGE** scoring and topic extraction; stored versioned results in **Snowflake**, projected to cut **operational expenditures by 70%** through automated evaluation and reporting

### WISE Cities

College Park, MD

*Software Engineer Intern | AI/ML Club*

*Feb. 2025 – May. 2025*

- Led backend development of a recommendation system for an **NIA**-funded startup building a platform for older adults to find local organizations and activities; currently in pilot with **100+** users
- Engineered a **Python**-based **gRPC** server and client to fetch, normalize, and serve **500+ MongoDB** organization/activity records, enabling efficient semantic embedding and backend integration
- Integrated **all-MiniLM-L6-v2** and **Pinecone** to enable fast, accurate k-NN recommendations for search queries

### USDA

Riverdale, MD

*Technology Intern*

*Jun. 2024 – Aug. 2024*

- Built **Power Automate** flows and **Microsoft Lists** integrations to automate inbox processing, enabling auto-responses and sorting; reduced manual workload by **68%** and improved task completion time by **15%**
- Directed accessibility testing for **142** web applications, ensuring Section 508 compliance standards were met
- Coordinated remediation efforts for Java and C#/.NET applications with **25** app development team members

### University of Maryland

College Park, MD

*Teaching Assistant, CMSC330 (Programming Languages)*

*Jan. 2025 – Present*

- Develop and test **7 OCaml/Rust** projects, writing **50+** unit tests and documentation for 900+ students
- Streamline releases using **GitHub**, **Docker**, and **GitHub Actions**, improving deployment efficiency
- Collaborate with **39** TAs to grade exams, quizzes, and projects, ensuring consistent feedback
- Hold **5+** weekly office hours, providing 1:1 support on type inference and program correctness

## Projects

### Code Your Own Adventure 🎮 | React, TypeScript, Tailwind

May. 2025 – Present

- Engineer a terminal-style adventure game to help incoming UMD CS students navigate realistic college scenarios and explore paths to skill-building, career prep, and CS involvement; showcased to **80+** attendees at **DCC** Capstone Fair
- Implement stat tracking for Academic/Social/Career balance, with Energy limits to enforce meaningful tradeoffs
- Design a modular system that loads story scenarios from structured files, enabling expansion for future semesters

### Game Recommendation Engine | Python, Pandas, Sentence-Transformers, Flask

Feb. 2025

- Built a tool to help friends find similar games by comparing descriptions and metadata from a **97K+** Steam dataset
- Served top game recommendations and metadata through a **Flask** backend with simple query routing for local use

### Shell Junior | C, Unix

Apr. 2024

- Built a custom shell program in **C** that supports command execution, file redirection, piping, and subshell execution
- Implemented process management and error handling using `fork`, `execvp`, `wait`, `dup2`, and `pipe` to manage child processes and handle input/output redirection