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, FastAPI, 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 **70%** 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
- Host **5+** weekly office hours and coordinate grading with **39** TAs to ensure consistent feedback

Projects

ClassGPT | *Python, FastAPI, Celery, Docker, Supabase, Pinecone, AWS S3, React* Jun. 2025

- Developed a distributed platform with **FastAPI**, **React**, and **Docker** microservices that enables students to upload and query class notes in natural language, providing instant, cited answers to accelerate studying
- Implemented **RAG** pipeline using **Celery** and **Pinecone** for automated document parsing, chunking, and semantic search, streamlining information retrieval across multiple courses
- Integrated **Supabase** for authentication and **AWS S3** for storage, ensuring secure and scalable multi-class support

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 a triangle-based stat system for academics, career, and social life, with an energy bar to enforce tradeoffs

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