Evan Zimmerman

evanzimm@umich.edu | (703) 304-2447 |LinkedIn: linkedin.com/in/evan-zimmerman-3817541aa
Github: https://github.com/EvanZimmerman307?tab=repositories
U.S. Citizen — Top Secret Clearance (DODCAF Tier 5 Investigation: 11/30/22, Access Granted: 12/27/22)

EDUCATION

University of Michigan - Ann Arbor, MI *August 2024 - December 2025 (Expected)*
Master of Science in Computer Science and Engineering (GPA: 4.0/4.0)
Coursework: Database Systems, Machine Learning, Scalable Systems for Generative AI, Natural Language Processing

University of Virginia - Charlottesville, VA *August 2020 - May 2024*
Bachelor of Science in Computer Science, *Minor in Data Science* (GPA: 3.9/4.0)

WORK EXPERIENCE

Amazon Web Services (Bedrock), *Software Development Engineer Intern* – New York, NY *May 2025 – August 2025*

- Built a distributed request visibility tool for the Bedrock–Anthropic hosting stack that reconstructed end-to-end request lifecycles, reducing operator debugging time from hours to minutes; implemented in Python with infrastructure provisioned in Typescript via AWS CDK; hosted with ECS Fargate.
- Designed and deployed a tokenizer hosting architecture for third-party model providers, enabling token counting without inference; evaluated tradeoffs of different stacks, selecting SageMaker for better provider onboarding.

AnalystKit, ***Software Engineer Intern*** – Charlottesville, VA *September 2023 – September 2024*

- Built a RAG-powered AI chatbot with Python, Langchain, Chroma DB, and the OpenAI API to explain investing concepts to users.
- Developed a Python-based system that forecasted stock return covariance using a multi-predictor, weighted IEWMA methodology, and constructed optimal portfolios under various investment strategies based on the predicted covariance matrices.

Allied Associates International, *Software Engineer Intern* – Gainesville, VA *May 2022 – July 2022*

- Developed a Python program that performed network protocol analysis on packet captures of over 10 GB, sent from IoT devices, which led to discovering device-identifying patterns in network data
- Fixed a program, written in C#, that was failing in production to automate packet capture analysis for an IoT device

PROJECT EXPERIENCE

UMich, *PyDuck* – *Python, DuckDB, Pandas, SQL, NumPy, Polars*

- Developed PyDuck, a Pandas-style DataFrame library that executes operations with DuckDB, enabling vectorized execution, multithreading, and out-of-core performance for scalable analytics; achieved over 100× speedups on workloads up to 10 GB versus Pandas on common aggregation and filtering tasks.
- Built the Quack abstraction for immutable, chainable virtual views with lazy evaluation and SQL lineage tracking, and implemented a modular SQL compiler translating common DataFrame operations into SQL.

UMich, *ReviewGenie* – *Python, Flask, JavaScript, React, MongoDB, Llama 3, Beautiful Soup*

- Developed an LLM-powered web application to help businesses solicit meaningful product reviews and enable users to perform searches for relevant product reviews – led backend development and competed in MHacks 17.
- Scraped product websites and utilized Llama 3 to generate product profiles and tailored review prompts.
- Engineered backend functionalities with Flask to categorize review submissions, store reviews in MongoDB, and search for reviews by processing user queries with Llama 3 and filtering reviews with vector similarity search.

SKILLS

Languages & Frameworks: Python, Go, TypeScript, SQL, Java, C++, HTML/CSS, Pandas, Flask, PyTorch, React
Cloud & Databases: AWS (Bedrock, EC2, EKS, Lambda, DynamoDB), CDK, Kubernetes, PostgreSQL, MongoDB, DuckDB