

Aaron Zeng

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EDUCATION

University of Maryland

3.78 GPA

B.S. Computer Science, Entrepreneurship Minor

College Park, MD

- Relevant Coursework: Linear Algebra, Probability & Statistics, Algorithms, Data Structures, Data Science, Object-Oriented Programming, Discrete Math, Computer & Network Security

WORK EXPERIENCE

JPMorganChase

July 2025 – Present

Software Engineer I

Dallas, TX

- Built an end-to-end data extraction pipeline that powers MDS AI, an internal RAG-based developer assistant that helps engineers implement and integrate the Manhattan Design System, the firm's UI component library used across 200+ Chase applications. Sole owner and SME from design through production deployment.
- Designed a hybrid parsing architecture combining AST-based extraction across MDX, TSX, and TypeScript prop files with a targeted scraping layer for dynamic Storybook code examples.
- Optimized pipeline for release cycles via incremental processing, detecting changed components per release, reparsing only those while forwarding cached data, significantly reducing runtime on each deployment.
- On track for promotion to *Senior Engineer* within one year of joining as a new graduate, bypassing one intermediate level.

JPMorganChase

May 2024 – Aug 2024

Software Engineering Intern – Machine Learning

Wilmington, DE

- Refactored a monolithic Amazon EMR pipeline into 6 modular AWS Glue jobs, cutting resource consumption and unlocking horizontal scalability across the data platform.
- Leveraged Spark to optimize ETL workflows, enabling faster execution and efficient resource utilization within Glue jobs.
- Integrated 2 production ML models with real-time drift detection via Arthur AI, enabling automated alerts and reducing silent model degradation risk.

Additional Experience: JPMorganChase (Intern, 2023), US Dept of Agriculture (Intern, 2022)

PROJECTS

- **The Better Threads Project** — Built a GPT-style transformer from scratch in PyTorch (attention mechanisms, layer norm, positional embeddings), loaded GPT-2 pretrained weights into the custom architecture, and fine-tuned for cyberbullying detection, hitting 92.81% accuracy and 88.08% F1 across 568k examples. Documented failure modes in recall on context-dependent harassment, attributing the ceiling to both dataset underrepresentation and the fundamental mismatch of causal attention for sequence classification. [Check it out here.](#)
- **Prept.AI** — Founded and launched an AI-powered interview coaching platform where users record responses and receive personalized feedback. Fine-tuned GPT-4 on a hand-labeled dataset of crowdsourced interview responses structured as preference data. Secured \$1,500+ in grant funding through the UMD Dingman Center for Entrepreneurship plus \$5,000+ in crowdfunding.
- **GptGO Chrome Extension** — Built and grew GptGO to 50,000+ installs, a Chrome extension bringing ChatGPT to any webpage natively. Engineered background threading and push notifications via Chrome APIs, then drove 4.75M+ impressions through organic social distribution with zero ad spend. [Check it out here.](#)

WRITING

Medium — Regularly publishes articles on AI, software engineering, and entrepreneurship. [Check it out here.](#)

TECHNICAL SKILLS

Programming Languages: Javascript, Python, OCaml, Java, Ruby, Rust, Go, C

Libraries: React, Redux, Express, Tailwind, PyTorch, Sklearn, Pandas, NumPy

Tools: Git, Docker, Node, Postman, Spark, Jenkins

Databases: MongoDB, Firestore, DynamoDB, MySQL, Supabase