Alexander Wang

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Education

Cornell University
Aug 2019 — Dec 2022 B.A Computer Science (Machine Learning/Scientific Computing)
Aug 2019 — Dec 2022 B.A. Mathematics (Applied Math)

Work Experience

Amazon AWS HealthOmics Software Engineer II July 2025 — Present

- Engineered the AWS HealthOmics MCP server, VS Code-compatible Kiro extension, and Kiro Powers suite to bridge bioinformaticians with cloud computing, enabling seamless, agentic workflow execution directly within their development environment. Downloaded 2.6k+ times. From Prompt to Pipeline: AI-Powered Bioinformatics Workflow Development with Kiro and AWS HealthOmics
- Designed a new database schema to reduce millisecond latency by 80+% for starting workflow runs. Develop mechanisms to keep the database up-to-date based on incoming event logs. (Kotlin, Python, DynamoDB, Eventbridge, Kinesis Streams).

Amazon AWS HealthOmics Software Engineer I Jan 2024 — July 2025

- Designed and implemented a reusable system for onboarding new GPU and large-compute instance types for AWS HealthOmics engines and workflow tasks used by over 4000 workflow runs since release. (Kotlin, DynamoDB, EC2, ECS) AWS HealthOmics workflows now support NVIDIA L4 and L40S GPUs and expanded CPU options
- Implemented API security test suite to validate IAM permissions surface on all public HealthOmics APIs running 20+ times per week to ensure safe deployments via CI/CD. (Java, IAM, API Gateway)

Research Experience

Researcher at Cornell University Aug 2022 — Aug 2023

Advised by Professor Anil Damle

- We developed a large language model pruning algorithm that reduced the size of OPT-1.3B, an open source 1.3B parameter large language model, by 20% without a severe reduction in perplexity score on common benchmark datasets.
- STAT: Shrinking Transformers After Training

ProjectX 2021 Undergraduate Research Competition Aug 2021 — Feb 2022

- Led a team of 6 undergraduate students to investigate the spread of misinformation on Twitter using a fine-tuned BERT Model. Our paper won the competition ($25,000 prize) and presented at the 2022 UofT AI conference.
- An Investigation into the Viral Spread of COVID-19 Misinformation

Skills

Languages: Java, Kotlin, C, C++, Python, Rust, TypeScript, HTML/CSS/JS, PostgreSQL
Tools: AWS, Terraform, (Ubuntu, Arch, NixOs) Linux, Emacs, LaTeX, Postman, Ollama

Last updated: July 25, 2026