Alexander Wang

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Education

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

Work Experience

TAE Power Solutions SWE Intern Aug 2023 — Present

- Developed a unit testing procedure for testing the CANopen library for microcontrollers and amended our product pipeline to include unit testing.
- Wrote unit tests to cover over 20 modules in C across our codebase by leveraging Unity, CMock, and Ceedling.

Amazon Music SWE Intern May 2022 — Aug 2022

- Designed and implemented an aggregated data dashboard for the content publication pipeline capable of analyzing >1M inbound requests per day.
- Integrated React.js, Java, AWS Redshift, SQS, S3, and CloudFormation to develop this tool. Used Mockito as the primary unit testing framework.

Amazon AWS Connect SWE Intern May 2021 — Aug 2021

- Redesigned and refactored a customer resource deletion API to adhere to GDPR regulations capable of handling > 100k requests per day.
- Utilized Java, AWS SQS, AWS EC2 in the reimplementation. Used Mockito to write unit tests.

Research Experience

Researcher at Cornell University Aug 2022 — Present

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 serious reduction in perplexity score on common benchmark datasets.
- Paper submitted to NeurIPS and will be available publicly soon.

ProjectX 2021 Undergraduate Research Competition Aug 2021 — Feb 2022

- Led a team of 6 undergraduate students to investigate the spread of misinformation on Twitter during 2020 and 2021 using a fine-tuned BERT for detecting misinformation.
- Won the competition ($25,000 prize) and presented at the 2022 UofT AI conference. (citation below)

Skills

Technical: Java, C, C++, Python, React.js, TypeScript, HTML/CSS/JS, SQL, PostgreSQL
Tools: (Arch) Linux, Emacs, Vim, LaTeX, AWS EC2/SQS/S3/CloudFormation
Libraries: PyTorch, Numpy, Pandas, Seaborn, LAPACK

Last updated: November 1, 2023