

Alexander Wang

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EDUCATION

Cornell University (GPA:3.86/4.00)
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

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

- Redesignated 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

- Developed a novel retraining-free model compression method based on interpolative decompositions and applied it to transformers and large language models.
- This method, termed STAT, 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

- Lead 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)

PUBLICATIONS

Wang, Alexander et al. (2022). *"COVID-19 was a FIFA conspiracy #curropt": An Investigation into the Viral Spread of COVID-19 Misinformation*. arXiv: [2207.01483](https://arxiv.org/abs/2207.01483) [[cs](#).[CY](#)].

SKILLS

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