

AKHIL NADIGATLA

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WORK EXPERIENCE

Software Engineer Intern | Java, AWS, GCP

Splunk

June 2021 - August 2021

San Jose, CA

- Worked on Observability Cloud Analytics team to improve real-time streaming capacities and efficiency of platform that drives all metric transformations processed by SignalFx product.
- Developed novel workflow for large window, fine resolution tasks that increased capacity by ~3,500% and cut job migration and restart times by ~700% by offshoring window data to external persistence.

Web Development and Support Lead | JavaScript, AWS

CS Academy

May 2019 - December 2019

Pittsburgh, PA

- Drove content creation, testing, and development of free platform for learning computer science principles. Led development of features that improved ease-of-use, achieving a five-fold increase in active users.

RESEARCH

Neural Zeroth-Order Optimization: Empirical Study and Insights

CMU Machine Learning Department

August 2021 - May 2022

Pittsburgh, PA

- Advised by **Prof. Ravikumar** for honors senior thesis program, investigating more efficient derivative-free optimization techniques in high-dimensional settings without any assumptions about the underlying objective function.

Adversarial Robustness via Model Ensembles

CMU Machine Learning Department

October 2020 - May 2021

Pittsburgh, PA

- Under the mentorship of **Prof. Ravikumar**, evaluated effects of weighted ensembles of classifiers on adversarial robustness of deep neural networks.
- Witnessed a 1 to 2% (statistically significant) improvement in accuracy on perturbed samples from MNIST and CIFAR-10 datasets.

SELECTED PROJECTS

SafeEvents | Python, Firebase

August 2020 - November 2020

- Developed mobile event tracking application providing COVID-19 risk estimates by locality using active data from Georgia Tech project.
- Used at Univ. of Minnesota - Twin Cities and UT - Austin.

Dendrogram Generator | R

June 2020 - August 2020

Nairobi, Kenya

- Created pipeline to convert DNA marker information for different crop varieties into dendrograms to aid in trait association, all wrapped in a GUI.
- Currently in use at International Institute for Tropical Agriculture.

ConvoCoach | Python, GCP

March 2019 - June 2019

- Developed application, along with four colleagues, to assist and improve the capabilities of autistic individuals with daily conversations.
- Utilized cloud NLP, image association, speech recognition and synthesis tools to drive predictive, dynamic conversations.

EDUCATION

B.Sc. in Computer Science

Carnegie Mellon University

August 2018 - May 2022

University Honors, SCS College Honors

Major: Computer Science

Minors: Machine Learning, Philosophy

COURSEWORK

- Distributed Systems (15-440)
- Algorithm Design and Analysis (15-451)
- Machine Learning (10-315)
- Software Engineering (17-313)
- Programming Languages (15-312)
- Parallel Data Structures & Algos (15-210)
- Computer Systems (15-213)
- Theoretical CS (15-251)

TEACHING

- Research and Innovation in CS (15-300)

SKILLS

Python C C++ Java SML

JavaScript/TypeScript


PyTorch Tensorflow JAX Spark

React MongoDB Git L^AT_EX

AWS GCP Docker CI/CD Agile

ACHIEVEMENTS

 **Putnam Math Competition**
Top 500 (out of ~4000)

 **CMU SCS Dean's List**
High Honors (F'20, F'21, S'22)

 **TartanHacks**
Best Social Welfare Hack

 **President's Award of Kenya**
Gold Standard (by H.E. Uhuru Kenyatta)

ACTIVITIES

- Atlas Autonomous Buggy** | Software Team
September 2019 - May 2020
- Business Technology Club**
January 2019 - May 2019
- South Asian SA** | Student Representative
September 2018 - May 2019