Ryan Goggins

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EDUCATION

CARNEGIE MELLON UNIVERSITY
SCHOOL OF COMPUTER SCIENCE
BS in Artificial Intelligence
May 2022 | Pittsburgh, PA

PHILLIPS ACADEMY
June 2018 | Andover, MA

STANFORD UNIVERSITY
Undergraduate Coursework
Summer 2016 | Stanford, CA
Computer Science 106A (Grade: A-)

RELEVANT COURSEWORK

(10-403) | Deep Reinforcement Learning
(10-417) | Intermediate Deep Learning
(15-455) | Complexity Theory
(11-442) | Search Engines
(11-411) | Natural Language Processing
(10-315) | Machine Learning
(15-281) | AI Repr. & Problem Solving
(15-251) | Theoretical Computer Science
(15-210) | Parallel Data Structures and Algos.
(15-213) | Computer Systems
(36-218) | Probability Theory for CS

SKILLS

PROGRAMMING LANGUAGES
Python • C++ • JavaScript • Java • C •
Standard ML (strongly-typed, functional) •
x86-64 • PHP • Hack (Facebook) • SQL

RELEVANT LIBRARIES/FRAMEWORKS
TensorFlow • PyTorch • Node.js • Sequelize •
GraphQL • React.js • Redux • D3.js •
PostgreSQL • Docker • Kubernetes • GCP •
AWS • Kafka Streams • MySQL

ACTIVITIES

AWARDS
CMU School of Computer Science Deans List
• Phillips Academy CTF - 1st place at Phillips
Academy; 6th place international • AP Scholar
with Distinction • National Merit Scholar

MISCELLANEOUS
Chess • Tutoring • Spanish (conversational) •
Bouldering • Cooking • Guitar • Kaggle

PROFESSIONAL EXPERIENCE

CMU LANGUAGE TECHNOLOGIES INST. | Teaching Assistant
Spring 2022 | Pittsburgh, PA
- Teaching Assistant for Search Engines (11-642)

CMU MACHINE LEARNING DEPT. | Teaching Assistant
Fall 2021 | Pittsburgh, PA
- Teaching Assistant for Intermediate Deep Learning (10-617)

GOOGLE | Software Engineering Intern
Summer 2021 | Mountain View, CA
- Worked on the AViD Search+ team within the Display Ads organization to analyze the correlation between human evaluations of ad campaigns and ad conversion rates for Search and Display ads
- Analysis performed in Python and SQL; findings are used to improve the accuracy of the Predicted Ad Conversion Rate model
- Designed and implemented an advertiser experiment infrastructure to boost experiment efficiency and increase functionality in C++ using Flume (Next-Gen MapReduce)
- Developed a pipeline for identifying ad campaign ineligibility to increase the efficiency of the ad bidding process in C++ and internal Kubernetes

FACEBOOK | Software Engineering Intern
Spring 2021 | Menlo Park, CA
- Worked on the Instagram Accurate Information team to create the IG Trend Visualizer for displaying real-time data about viral content relating to politics, social issues, Covid-19 and vaccine dissemination
- Wrote queries in GraphQL and SQL, backend in PHP and Hack, frontend in React and Redux, and data pipelines in Python

ETSY | Software Engineering Intern
Summer 2020 | Brooklyn, NY
- Worked on the Offsite Listing Feeds team to develop a pipeline that shows Etsy listings on external advertising platforms like Google Ads
- Leveraged Apache Kafka Streams to write backend architecture in Java to monitor change data capture feeds for a MySQL database
- Developed an Etsy internal API in PHP to process listing prices and shipping costs

RESPOND SOFTWARE | Software Engineering Intern
Summer 2018, 2019 | Mountain View, CA
- Designed and implemented the company's notification service from scratch using PostgreSQL, Sequelize, Node.js, GraphQL, and React.js
- Created Long Short-Term Memory (LSTM) networks and deep neural nets in efforts to detect malicious web proxy traffic and identify malware beaconing

PROJECTS

HIGH RESOLUTION ABSTRACT ART GENERATION
August - December 2020 | Pittsburgh, PA
- Created adaptations of DCGAN, Wasserstein GAN, EBGAN, BEGAN and NVIDIA's StyleGAN2-ada for generating pieces of abstract art in Intermediate Deep Learning (10-417)
- Leveraged variants of upscaling models including EDSR and SRNTT to achieve super-resolution of 16x along with transfer learning-based approaches like MZSR, evaluated results with Frechet Kernel Inception Distance