

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 and Control (Spring 22)
(11-442) | Search Engines (Fall 21)
(15-440) | Distributed Systems (Spring 22)
(10-417) | Intermediate Deep Learning
(15-455) | Complexity Theory
(15-281) | AI Repr. & Problem Solving
(10-315) | Machine Learning
(11-411) | Natural Language Processing
(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

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

PROFESSIONAL EXPERIENCE

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
- Developed an automated pipeline for identifying ad campaign ineligibility and producing campaign metadata in C++, increasing the efficiency of the ad bidding process

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

- Developed and deployed 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 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
- Produced quantified metrics for evaluating my models, leveraging Frechet Inception Distance, Kernel Inception Distance, Precision, Recall, and Inception Score

REINFORCEMENT LEARNING FOR PACMAN

Fall 2019 | San Francisco, CA

- Developed an RL agent for Pacman using asynchronous value and policy iteration in order to create an approximate Q-Learning model