

Work Experience

Microsoft

REDMOND, WA

Software Engineer Intern

May '21–Aug '21

Developed a new product for the Quantum Systems Team.

- Developed design docs to specify business impact of a Quantum Resource Estimation Hub
- Built a platform MVP backend API using Django with a code runner backed by RabbitMQ (2.6k lines of code)
- Delivered frontend dashboard using NextJS and Plotly
- Enabled future project success by deploying documentation on Azure Static Web Apps and enabling continuous integration (CI) tooling using Azure Pipelines

Synthego | 8VC Fellow

SAN FRANCISCO, CA

Software Engineer Intern

May '20–Aug '20

Matched with Synthego through the competitive (30/1000) fellowship program. Was a member of the team that developed the core software operationalizing CRISPR advances

- Operated in a full-stack capacity (Django and React) to deploy 9 new production-ready features
- Modernized 3 large (10,000 lines of code) codebases to use Python best practices: linting (black, flake8) and type checking (mypy)
- Prototyped and implemented automatic Django API documentation compliant with OpenAPI v3. Deployed API and developer documentation using Swagger and Sphinx

Georgian Partners

TORONTO, ON

Data Science Intern

May '18–Aug '19

Led the development of Foreshadow, an open-source Python automatic machine learning package.

- Architected the system to build end-to-end ML pipelines that interop sklearn and pandas (100% branch test coverage)
- Wrote an extensible benchmarking package and research paper that gained significant Twitter traction
- Authored three Medium blogs on automatic machine learning and Python tooling that were read 5,000+ times

Oklahoma City Thunder

RALEIGH, NC

Data Science Intern

January '19–May '19

After a strong performance at the NBA Hackathon, was recruited to develop a basketball shot quality model

- Grokged input data using game footage and developed dynamic data visualizations using seaborn and bokeh
- Presented a shot quality model (ROC AUC, 0.92) to team executives that increased downstream accuracy by 1%
- Delivered a deployable CLI for the model that could be rerun yearly to mitigate model drift

Precision Lender

CARY, NC

Software Engineer Intern

May '17–Aug '17

Was invited by the CEO to work on the company's core product: a commercial loan pricing tool

- Architected and developed a scalable natural language processing (NLP) system that cached queries using a C# Azure Service Fabric Stateful microservice in user by over 100 banks worldwide

Education

Carnegie Mellon University

PITTSBURGH, PA

MS in Computer Science

2020–2022

Attended the #1 graduate computer science program in the US.

- Relevant Courses: Machine Learning with Large Datasets, Space Robotics, Deep Learning Systems, Cryptography Theory and Applications

NC State University

RALEIGH, NC

BS in Electrical Engineering

2017–2020

BS in Computer Engineering

2017–2020

Studied at a top 10 ECE program on multiple scholarships.

- Relevant Courses: Discrete Mathematics, Data Structures, Control Systems, Industrial Robotics, Embedded Systems, Computer Vision, Object Oriented Development, Differential Equations, Multivariable Calculus (III), Graph Theory

NC School of Science and Mathematics

DURHAM, NC

High School Diploma

2015–2017

Attended a public residential school, heralded as the top high school education in the U.S., on a full-scholarship.

- Relevant Courses:

Selected Awards and Achievements

Year	Description	Award
2021	Global	Featured in NY Times
2020	Global (25/400)	8VC Fellowship
2020	University (1/1505)	NC State Senior Leadership Award
2019	Global (28/2700)	IEEE Xtreme Hackathon 13.0
2018	Global (30/500)	NBA Hackathon Finalist
2018	Regional (2 nd)	IEEE SouthEastCon Hackathon
2017	International (Top 2%)	FIRST Robotics World Quarter Finalist
2017	National	IBM Watson Scholar
2016	International (Top 7%)	HiMCM Finalist
2016	National (selected 30)	MIT Beaverworks Robotics Institute

Skills

Programming:

Python, C, C++, LaTeX, JavaScript, Objective-C, Assembler, Java, Unix command suite, Git, and GitHub.

Data Science:

AWS EC2/Batch/Lambda, SQLAlchemy, BeautifulSoup, Selenium, OpenCV, Pandas, Numpy, Keras, Tensorflow, PyTorch, Scikit-Learn, Dask, Matplotlib, Seaborn, and Bokeh.

Selected Projects

YCombinator Hackathon (2018): Duolingo for Music

Invited to Mountain View to compete in a 24 hour product hackathon. Developed the DuoLingo for music with an MVP that used advanced signal processing to provide user feedback and instrument play style.

NBAHackathon:

A player lineup optimization model using LSTM based deep neural network architecture that efficiently parsed aggregated play by play data.

ROS for FIRST Robotics:

The first implementation of the Robot Operating System (ROS) robot sensor information processing protocol at the high school level of robotics.