

Education

University of Illinois at Urbana-Champaign

Urbana, IL

B.S. Computer Science and Geography & Geographic Information Science - 3.93/4.0 GPA

Aug. 2020 - Dec. 2021

College of DuPage

Glen Ellyn, IL

A.S. Computer Science - 3.88/4.0 GPA

Aug. 2018 - May 2020

Work Experience ____

Amazon New York, NY

Software Development Engineer

Feb. 2022 - Present

- Design and implement scalable systems to provide retail data at a high spatial resolution, supporting localized advertising for stores such as Amazon Fresh and Whole Foods.
- Publish catalog item data in highly-available, low-latency caches to support Amazon's various advertising use cases, including machine learning, ad moderation, and the delivery of hundreds of millions of ads per second

Amazon Web Services Seattle, WA

Software Development Engineer Intern

May 2021 - Aug. 2021

- Designed and implemented the Database Migration Service's first serverless system to reduce latency, improve scalability, and cut operational
 costs.
- Automated capital expenditure monitoring workflows to reduce unused compute units by 4x, saving \$30,000 and counting.

CACI International Lisle, IL

Software Development Intern

Jan. 2021 - May 2021

- Evaluated Splunk as a means to rapidly detect and respond to cyber attacks on telecommunications networks.
- Modeled, generated, and analyzed large amounts of SIP protocol network traffic to simulate normal use and a diverse set of cyber attacks.

ESPO Engineering Corporation

Willowbrook, IL

Software Engineer Intern

Feb. 2020 - Mar. 2021

- Created a project management system using the Django web framework.
- Automated internal processes end-to-end, from processing incoming jobs to invoice creation and billing.
- Created a tool which efficiently routes employees to each inspection site, saving hours per day.

National Center for Supercomputing Applications

Urbana, IL

Undergraduate Research Fellow

May. 2019 - Jan. 2021

- Used high performance computing to perform sensor fusion on precision agriculture data, including satellite images, soil sensors, and the crop harvester's geolocation and yield data.
- Assembled a deep learning dataset used to detect and quantify landscape change in the Arctic.
- Simulated environmental effects of installing low-impact developments across the US with the EPA's Storm Water Management Model.

Argonne National Laboratory

Lemont, IL

Visiting Student
 Implemented a distributed query system allowing Department of Energy national laboratories to share cyber threat indicators.

- Integrated Splunk as a data source for incoming cyber threat queries.
- Designed challenging puzzles for the team's annual cyber security CTF tournament.

Extracurriculars

HackIllinoisUniversity of Illinois

API Developer Aug. 2020 - Dec. 2021

- · Coordinated with iOS and Android teams to add new features in preparation for the university's annual hackathon.
- Implemented an extensible end-to-end testing suite using Go and the Sling framework.
- Developed CI/CD pipelines to speed up software deployment to the cloud.

Robotics Team College of DuPage

Lead Software Developer Aug. 2019 - May 2020

- Trained a neural network to detect rocks and craters for autonomous navigation in preparation for NASA's Robotic Mining Competition.
- Led a transition from C++ to Python to speed up onboarding and contribution of new programmers.
- · Collaborated with mechanical and electrical teams to augment robots for the Midwest Robotics Design Competition.