

# Nathan Cohen

<https://www.cs.purdue.edu/homes/cohen53/>

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## EDUCATION

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### Purdue University

*Bachelor of Science in Computer Science*

*Certificate of Entrepreneurship*

West Lafayette, IN

*Aug 2017 – May 2021*

*GPA: 3.77/4.00*

## EXPERIENCE

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### Cisco Systems

*Software Engineering Intern*

San Jose, CA

*May 2020 – Aug 2020*

- **Causality:** Designed and implemented a root cause analysis library, which was used for detecting failures in routers. Strategies include parsing and evaluating custom expressions across various hierarchical forms of data.
- **Causality UI:** Developed a React front end to display hierarchical results of a root cause analysis on a causality graph.

### Discover Financial Services

*Software Engineering Intern*

Riverwoods, IL

*May 2019 – Aug 2019*

- **Secure Document Upload:** Implemented backend of account recovery system in Spring Boot application within security spec. Successfully deployed and maintained product with 95% test coverage. Implemented and maintained Jenkins pipeline for code deploy and testing.
- **JWT 2.0:** Refactored legacy API to abide by modern security standards.

### Purdue University

*Teaching Assistant & Volunteer Work*

West Lafayette, IN

*May 2018 – Dec 2019*

- **CS 18000: Problem Solving and Object-Oriented Programming:** Authored bi-weekly labs for Purdue's introduction to computer science course in Java. Mentored students in completing their work.
- **CS 25100: Data Structures and Algorithms:** Worked as senior undergraduate teaching assistant under Professor Gustavo. Prepared and graded homework and exams, and wrote automated grading bash scripts.
- **Purdue Athletic Life Success Program: Computer Science Instructor:** Organized and directed a 4-week introductory computer science course for students from Lafayette area primary schools.

### Alpha Epsilon Pi

*Philanthropy Chair*

West Lafayette, IN

*Sep 2018 – Dec 2019*

- Managed year long committee for organization's philanthropy event and raised upwards of \$3,000 dollars for charity.
- Recognized for best philanthropy growth at Alpha Epsilon Pi's International convention.

## PROJECTS

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**UDP Video Stream:** Researched and designed a client/server video streaming application over UDP that deconstructs, sends, and reassembles H.264 frames.

**Boarding Simulator:** Designed multithreaded program to simulate the airbus boarding experience, testing different patterns of order to decrease wait time.

**Depend On Me:** Built backend for web application performs task managements and scheduling for teams practicing Agile.

**LST Scheduler:** Developed and implemented a new process scheduler for the XINU operating system which used slack time as means for deciding priority.

## RELEVANT COURSEWORK

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|--------------------------------|-----------------------|---------------------|
| • Data Structures & Algorithms | • Computer Networks   | • Compilers         |
| • Operating Systems            | • Information Systems | • Cryptography      |
| • Analysis of Algorithms       | • Systems Programming | • Computer Security |

## PROGRAMMING SKILLS

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**Languages:** C, C++, Python, Java, Scala, Rust, ARM, SQL, PL/SQL, JavaScript, TypeScript

**Technologies:** Git, GCC, LLVM, LLDB, Spring Boot, JDBC, JUnit, Jenkins, AWS, LaTeX, ANTLR, React