

ANDREW HOU

COMPUTER SCIENCE

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EDUCATION

Purdue University, West Lafayette, IN

Bachelor of Science, Computer Science (May 2023)

GPA - 3.74 / 4.0

Honors College

Dean's List, Semester Honors (All Semesters)

University of Minnesota, Minneapolis, MN

Dual Enrollment, 23 credits (Fall 2015 - Spring 2019)

GPA - 3.4 / 4.0

RELEVANT COURSEWORK

Problem Solving & Object-Oriented Programming

Introduction to Algorithms & Data Structures

Foundations of Networking

Programming in C

Foundations of Computer Science

Competitive Programming I

Elementary Linear Algebra

Computer Architecture (*in progress*)

ACTIVITIES

Officer

b0llers CTF Team (August 2019 - Present)

- Collaborate with a team to exploit vulnerabilities, including binary reverse-engineering, SQL injection, cryptanalysis and cracking, and memory overflow
- Participate in regular competitions with the club and continue to expand my skillset
- Construct bootcamp training challenges as well as teaching and presenting materials for new and prospective members

Quartermaster

Boiler Blade (July 2020 - Present)

- Responsible for creation and upkeep of loaner equipment and ensure it is available for use by all

Teacher's Assistant

AP Computer Science (2017 - 2019)

- Checked work, answered questions, and hosted supplemental lectures

TECHNICAL SKILLS

Programming Languages C, Java, Python, R

Operating Systems Windows, GNU/Linux, Android

Methodologies Agile, Scrum, Kanban

Tools Android Studio, Bash, Fish, Git, IntelliJ, LaTeX,

OpenCV, Splunk

Foreign Languages Chinese (fluent)

WORK EXPERIENCE

Enterprise Technology Intern

State Farm (May 2020 - July 2020)

- Developed dashboards in Splunk to increase the team's awareness of infrequent and uncommon errors and enhanced existing dashboards for product monitoring
- Updated outdated JUnit test cases
- Monitored and triaged incident reports with HPSM

IT Security Operator

Purdue IT Security & Policy (October 2019 - Present)

- Assist with incident response & analysis, policy violations utilizing tools such as Splunk and Stealthwatch
- Provide support for IT security questions and concerns and respond to customer feedback and inquiries

IT Intern

Edina Public Schools (October 2016 - August 2019)

- Identified and patched exploits in network infrastructure using Nessus Scanner
- Provided technical support to students and faculty

PROJECTS

Purdue HCR App (Android, Java)

Developer (Fall 2019 - Current)

- App used by the Purdue Honors College & Residences
- Implemented point submission search functionality to improve user experience
- Developing deep-link functionality for universal QR codes shared among Android and iOS clients

FRC Team 1816 (Java, Python)

Control Systems & Programming Subteam Lead (2017 - 2019)

- Developed autonomous navigation algorithms using differential drive models and computer vision to locate and drive to targets
- Utilized LIDAR and IR to avoid obstacles and provide on-the-fly driver feedback via indicator light strips
- Utilized closed loop control (PID) for precise mechanism control and accurate robot localization
- Introduced Kanban and Agile methodologies for task tracking and prioritization in order to optimize development workflow
- Mentored middle school students in robot programming