

Matt Schwarz

704-775-2546 | mattschwarz5@gmail.com | mattschwarz.xyz | github.com/mjschwarz

EDUCATION

Vanderbilt University

Double Major: Computer Science and Medicine, Health, & Society

Nashville, TN

Expected May 2024

- GPA: 3.92 / 4.00
- SAT: 1570 / 1600 (Math: 800 / 800)
- Relevant Coursework: Robotics, Operating Systems, Data Structures and Algorithms, Design Patterns

EXPERIENCE

Software Engineer Intern

Walmart Global Technology

May 2023 - Present

Bentonville, AR

- Incoming software engineer intern

Software Engineer Intern

Ricoh USA

June 2022 - January 2023

Remote

- Developed programs to populate customer bundles with latest versions of software, reducing manual error
- Streamlined project setup workflows using Groovy scripting to automate repetitive version control tasks
- Created automated testing builds using Jenkins, decreasing manual testing time per release by weeks
- Weighed design approaches for 3+ software development projects alongside senior engineers

Research Assistant

Active Galactic Nuclei

August 2020 - May 2021

Vanderbilt University

- Collaborated with four team members in studying super-massive black hole phenomena
- Independently developed Python programs to analyze spectral data sets of quasar observations
- Generated spectral decomposition plots and other reports using specialized scientific packages

PROJECTS

Crypto Craze | *Python, Flask, JavaScript, React*

- Created a cryptocurrency which uses a proof of work consensus mechanism to maintain security
- Deployed a wallet app for viewing the blockchain and account balances, initiating transactions, and mining coins
- Managed a network of users using the publish-subscribe pattern to reduce data transmission overhead

Snake AI GUI | *Python, Pytorch, Pygame*

- Developed a Snake game that can be played by either a user or an AI
- Implemented a Q-learning deep neural network using Pytorch, training the AI to reach scores of 60+ points
- Utilized caching to save the training model state, greatly reducing training time

Pathfinding Visualization GUI | *Python, Pygame*

- Designed an interactive GUI application in which users place obstacles, select endpoints, and trace search paths
- Applied searching algorithms such as A*, BFS, and DFS to discover optimal approach

LEADERSHIP AND EXTRACURRICULARS

Teaching Assistant

Code Ignite

September 2021 – Present

Vanderbilt University

- Taught ~10 middle school students computer science and problem-solving principles on a weekly basis
- Developed a Java curriculum for middle and high school students

Vice President of Finance

Beta Theta Pi

October 2021 – November 2022

Vanderbilt University

- Directed and managed fraternity funds in excess of \$20,000

SKILLS AND INTERESTS

Languages: Python, Java, C++, JavaScript, Groovy

Tools and Frameworks: Git, Jenkins, React, Tailwind CSS

Interests: SCUBA, Weightlifting, Hiking (Eagle Scout)