RYAN HEISE

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Education

Purdue University	**GPA: 3.5**	**Aug 2020 – Dec 2024**

Bachelor of Science in Computer Science
West Lafayette, IN
Bachelor of Science in Mathematics

Relevant Coursework

- Data Structures & Algorithms
- Analysis of Algorithms
- Statistical Machine Learning (Graduate)
- Multi-variable Calculus
- Systems Programming
- Discrete Mathematics
- Linear Algebra
- Operating Systems
- Probability
- Computer Security

Experience

CS252 (Systems Programming) TA | *Undergraduate TA* — **January 2023 - May 2023**
West Lafayette, IN — *C, C++, LaTeX*

- Led two lab sections, guiding students in implementing advanced C++ projects, including malloc, a standard shell, and a web server, fostering skill development and project success
- Designed effective assignments and exams to enhance student comprehension of course material

CACI | *Software Engineering Intern* — **May 2022 – August 2022**
Lisle, IL — *Proxmox, Ghidra, PostgreSQL*

- Deployed Linux-based honeypot servers on the internet to collect and analyze information about malicious attackers
- Constructed a data pipeline to process over 100,000,000 captured packets and generate usable feature sets for machine learning applications
- Utilized Linux routing and iptables to construct a sanitized network for analyzing compromised machines

Youndle LLC | *Co-Founder* — **August 2020 – August 2021**
Valparaiso, IN — *Django, React, AWS*

- Engineered a service that streamlined the communication between small businesses and local teenage workers
- In order to deploy the website, it was hosted on an AWS EC2 instance with a PostgreSQL RDS Database
- In the Purdue Boiler 2021 start-up accelerator cohort

Projects

Heise Powless Pickem | *Python, Djagno, React, Linux* — **August 2024**

- Developed a comprehensive full-stack web application to manage and monitor my family's pick'em to win'em football league
- Constructed a back-end API using Django REST framework to communicate with the React-based front-end
- Deployed the website on a Raspberry Pi using Gunicorn and Nginx, and manually configured all networking settings

Neural Style Transfer | *Python, PyTorch* — **June 2024**

- Developed a generative AI that applies the stylistic features of one image to the content of another, such as rendering a painting of Shrek in the style of Van Gogh
- Designed and implemented neural style transfer using PyTorch, embarking on an exploration of PyTorch's capabilities and advanced deep learning models

Technical Skills

Languages: Python, C++, JavaScript, C, HTML/CSS, Java, x86 Assembly, PostgresSQL
Technologies/Frameworks: PyTorch, Numpy, Pandas, Django, ReactJS, Unix, AWS, Google Cloud

Awards & Certifications

AWS Partner: Technical Accreditation	July 2022
The Boiler Startup Accelerator	February 2021 - May 2021
1st Place Purdue Hello World Hackathon (Out of 55 Teams)	December 2020