

Ryan Leonard

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EDUCATION

Purdue University, West Lafayette, IN

December 2024

Bachelor of Science in Computer Science, Concentration in Software Engineering

GPA: 3.74

PROFESSIONAL WORK EXPERIENCE

Symetra Financial SWE Internship

May 2024 - Aug 2024

- Built and packaged a Python library that simplifies the process of interacting with a GraphQL API, reducing development time by 40% for the team.
- Developed cloud infrastructure using AWS AppSync and DynamoDB, enhancing service efficiency and supporting over 100 daily API calls.
- Collaborated with coworkers in Agile/Scrum environments to efficiently progress on work deliverables.

Cognition and Learning Lab Programmer

May 2023 - Current

- Deployed tests for data collection, used by researchers, resulting in a 15% increase in data collection efficiency.
- Performed software testing and maintenance for 5 current repositories and database servers to significantly reduce downtime.

Purdue Vertically Integrated Projects

April 2023 - Aug. 2024

Research Assistant

- Leading summer research team in continuing Machine Learning in Motion project in order for it to be ready for demonstration in August 2024.
- Overseeing current project goals and team member responsibilities to make sure the project is making consistent progress.
- Communicating between team members and project advisors to make sure long term goals are aligned with our work.

PROJECTS

LLM Driven Vulnerability Detection System

Aug 2024 - Current

- Collaborating with Horizon3.ai to create an automated vulnerability detection pipeline that trains an LLM to be able to optimize the process of finding bugs and security risks in code.
- Developing binary differentiation security module that leverages analysis tools such as Ghidra and BinDiff to identify differences in binary files and feed the reports to language models for training.
- Coordinated meetings as Scrum Master to make sure the software team was on track meeting deliverables for the pipeline.

Recipe Remix

Aug 2023 - Dec. 2023

- Created a full stack recipe software project in order to make cooking simpler and faster for college students.
- Led 6 person collaborative effort using React.js and a MongoDB database in order to create a streamlined and efficient development process.
- Developed backlogs, user stories, and project goals each sprint in order to streamline each sprint.
- Implemented react/node/express elements and integrated Google and Recipe RESTful APIs into the project to create a system that was efficient and simple to work with.

Machine Learning in Motion

Jan 2024 - Aug. 2024

- Utilizing the power of machine learning to create a dynamic system that detects humans, shapes, and motion in 3D space.
- Crafting an accessible interface that can be utilized by all, breaking barriers in the world of dance and artistic expression.
- Researching and integrating existing neural networks and models such as YOLO and OpenCv in order to better understand and develop a system that can better detect bodies in motion as well as estimate their depth from the camera.

TEACHING/MENTORING EXPERIENCE

Undergraduate Teaching Assistant

Jan 2023 - May 2023

- Guided students towards higher understanding of course content by asking questions that encourage students to work through problems, in order to enhance students problem solving skills.
- Created C programming labs to ensure course content is balanced yet challenging for 3 classes of 20 students.

LEADERSHIP/COMMUNITY OUTREACH EXPERIENCE

Alpha Phi Omega - Alpha Gamma Chapter (Rush- Co Chair)

Aug 2023 - Current

- Training new members in the program by befriending them and guiding them towards doing community service in order to help them become active APO members.
- Organizing service events such as campus clean ups and community outreach for new members to give them a sense of what our organization is about.

RELEVANT SKILLS

Machine Learning, Data Structures/Algorithms, HTML/CSS/JavaScript, Java/C/C++, MongoDB, React.JS, Next.Js, Express, TypeScript, React Native, RESTful API Development, SCRUM development, full stack, SQL, python, .NET, MERN, Git, Linux/Unix, software testing, frontend, backend, software development, AWS microservices, Systems Programming, Azure DevOps, Cyber Security, Binary Differentiation, LLMs, Spring, iOS, data science, Postgres, Docker, Apache Kafka/Spark