

# Ryan Leonard

ryanleonard.co

(908) 652-1950 | [rleonard772@gmail.com](mailto:rleonard772@gmail.com) | [linkedin.com/in/ryan-leonard02](https://linkedin.com/in/ryan-leonard02) | [github.com/Rleonard02](https://github.com/Rleonard02)

## EDUCATION

Purdue University, West Lafayette, IN

*Bachelor of Science in Computer Science, Concentration in Software Engineering*

December 2024

GPA: 3.75

## PROFESSIONAL WORK EXPERIENCE

### Symetra Financial SWE Internship

May 2024 - Aug 2024

- Built and packaged a Python library to streamline GraphQL API interactions, reducing development time for internal teams.
- Developed cloud infrastructure as code using AWS AppSync and DynamoDB and worked on an automated CI/CD pipeline using Azure DevOps to enhance service efficiency among my software team.
- Developed cloud infrastructure as code using AWS AppSync and DynamoDB, contributing to a scalable backend.

### Cognition and Learning Lab Programmer

May 2023 - Jan 1 2025

- Deployed interactive tests for data collection, improving data acquisition efficiency for research initiatives.
- Parsed and transformed JSON-formatted data into actionable insights, contributing to faster and more reliable analysis.
- Maintained and tested five repositories and database servers, reducing downtime and ensuring smooth research operations.

### Machine Learning in Motion - Research Assistant

Jan 2024 - Aug 2024

- Led a summer research team to enhance an ML-based system for body detection and depth estimation in real time.
- Integrated existing neural networks such as YOLO and OpenCV, improving object detection accuracy and performance.
- Oversaw project milestones, defined sprint goals, and assigned tasks to maintain consistent progress and meet strict deadlines.

## PROJECTS

### LLM Driven Vulnerability Detection System - Horizon3.ai

Aug 2024 - Dec 2024

- Collaborating with cybersecurity professionals to automate vulnerability detection by training large language models (LLMs). Developing a binary differentiation module utilizing Ghidra and BinDiff to identify critical changes in compiled files.
- Streamlining security analysis reports and feeding them to an LLM for advanced bug and risk detection.
- Acted as Scrum Master, scheduling meetings and ensuring the team meets deliverables.

### Recipe Remix

Aug 2023 - Dec 2023

- Designed a full-stack recipe solution for quick and convenient meal planning, targeting busy college students.
- Led a 6-person Agile team using React.js, Node.js/Express, and MongoDB, ensuring efficient collaboration and sprint goals.
- Developed backlogs, user stories, and project goals each sprint in order to streamline each sprint.
- Integrated Google and Recipe REST APIs for a seamless user experience in searching and organizing recipes.

### Don't Wreck My House - Airbnb Backend

Mar 2025 - Current

- Built a fully functional Airbnb-style reservation system in Java using Spring Boot and Maven, simulating real-world client requirements and feature changes.
- Designed and implemented domain models for data objects with layered architecture and Spring Dependency Injection.
- Implemented full CRUD operations, enforcing business rules (date validation, overlap checks, rate calculation) and persisting data via CSV-backed repositories.

## TEACHING/MENTORING EXPERIENCE

### Undergraduate Teaching Assistant

Jan 2023 - May 2023

- Mentored students in C programming and algorithmic thinking, boosting class-wide proficiency and engagement.
- Developed lab assignments that balanced theory with practical problem-solving for ~60 students across 3 sections.

## LEADERSHIP/COMMUNITY OUTREACH EXPERIENCE

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

Aug 2023 - Dec 2025

- Organized service events and community outreach, training new members to create engagement in volunteerism.
- Encouraged a culture of collaboration and philanthropy, guiding recruits through their journey to active APO membership.

## RELEVANT SKILLS

**Programming Languages:** Python, Java, C, C++, C#, JavaScript, TypeScript, SQL

**Frameworks & Libraries:** React.js, React Native, Next.js, Angular, Express (Node.js), .NET MVC, OpenCV, YOLO, JUnit, Maven

**Databases:** MongoDB, DynamoDB, MySQL, PostgreSQL, NoSQL (document & key-value)

**Cloud & DevOps:** AWS, AppSync, Azure DevOps, Docker, Kubernetes, Kafka, Git/GitHub, CI/CD pipelines, Linux/Unix

**Tools & Platforms:** Ghidra, BinDiff, REST & GraphQL APIs, Excel, Jira, CRM systems, HPC clusters

**Development Practices:** Agile/Scrum, Object-Oriented Programming, Test-Driven Development, Software Development Life Cycle, Design Patterns (MVC, Singleton), Multi-threaded Programming, Data Structures & Algorithms, Machine Learning, Computer Vision, SaaS architectures, SOAP web services, Quality assurance & debugging

**Soft Skills:** Problem-solving, Analytical thinking, Verbal & written communication, Team leadership & collaboration, Strategic planning, Relationship management, Troubleshooting, Adaptability