Rahul Medicharla

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EDUCATION

The Ohio State University — Columbus, OH
Bachelor of Science in Computer Science Engineering, Minor in Business — *August 2021 – May 2025*
Graduating with an **Undergraduate Research Distinction** — GPA: 3.7/4.0

EXPERIENCE

Software Engineering Intern — June 2024 – Present
Capital One — *Mclean, Virginia*
- Developing a Kubernetes-native operator in Go to assist with risk mitigation in Amazon EKS clusters by scanning live Docker containers for vulnerabilities found in a CVE Database and notifying them to internal stakeholders.
- Optimizing operator performance by at least **10%** through a Redis Cache and AWS Lambda functions.
- Pursuing a Certified Kubernetes Application Developer **(CKAD)** certification.

Undergraduate Student Researcher — January 2024 – Present
The Ohio State University — *Columbus, OH*
- Engineered a pose tracking algorithm to analyze human joint movement utilizing Yolov8, OpenCV, Google Mediapipe, and regression-based interpolation techniques.
- Optimized computation by employing image scale pyramids, resulting in a **50%** reduction in run-time.
- Drove the data-engineering process and currently training an autoencoder machine-learning model to flag abnormal movements with at least **90%** accuracy.

Software Engineering Intern — May 2023 – August 2023
WillowTree — *Columbus, OH*
- Led the creation of an end-to-end MVP for a 24/7 customer support chatbot using the React framework, collaborating with a cross-functional team of developers and designers, and following Scrum methodologies.
- Implemented a semantic search and response feature to enhance the customer experience by cutting down the response times from the customer service team by around **30%** utilizing large language models, vector embeddings, and an Azure SQL database.
- Deployed a custom back-end web API leveraging Azure Cloud Services, .NET framework, and C#.

AFFILIATIONS

Technology Lead — November 2023 – Present
Google Developer Student Club, The Ohio State University — *Columbus, OH*
- Direct educational workshops for **100+ members** about Google technologies and their implementations in practice.
- Hosted a four-session progressive workshop with on average **25+ members** to build a portfolio website using React and deploying it onto Google Cloud Platform.

President and Co-founder — August 2022 – Present
The Cooking Club, The Ohio State University — *Columbus, OH*
- Drove the organizational strategy, resulting in **400+** member recruitment in the first year and currently managing all operational aspects including funding, events, and member coordination.
- Organize and lead bi-weekly cooking workshops with an average of **30+** members to foster healthy cooking habits and explore cultures through cuisine.

PROJECTS

Event-driven Kubernetes | *Go, Amazon EKS, AWS Lambda, AWS Event-bridge, Docker* — May 2024 – Present
- Designing an Amazon EKS abstraction to enable Docker-containerized services to follow an event-driven workflow when running on clusters by leveraging AWS Lambda and AWS Event-bridge.
- Managing the lifetime of services and resources on EKS clusters to improve cost efficiency by at least **5%**.

Evolate | *Python, Pytorch, Scipy, Pandas, Numpy* — June 2023 – July 2023
- Engineered a data structure that autonomously switches between different data structures and search algorithms based on user behavioral patterns, resulting in a **10%** performance boost in computation speed.
- Trained a custom PyTorch Neural Network to determine the optimal implementations based on behavioral metrics such as insertion and deletion frequencies, search predictions, and search randomness.

Audio Studio | *Python, Google Cloud Platform* — October 2022
- Achieved **5th** place in Ohio State's annual Hackathon out of **1000** participants by delivering a speech-to-code editor from end-to-end within 24 hours.
- Collaborated in a group of four to create a program capable of mapping conversational voice commands to python code in real-time, allowing for greater accessibility in code.

TECHNICAL SKILLS

Languages: JavaScript, Python, Go, Java, SQL, C#, C
Frameworks: Kubernetes, React, React Native, .NET, Node.js, Flask, Ruby on Rails
Developer Tools: Git, Docker, Amazon Web Services, Azure Cloud Services, Google Cloud Platform
Libraries: Pytorch, Yolov8, Google MediaPipe, Opencv, Pandas, Numpy