

# Rahul Medicharla

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## EDUCATION

### The Ohio State University

*Bachelor of Science in Computer Science Engineering, Minor in Business*

Graduating with an Undergraduate Research Distinction

Columbus, OH

August 2021 – May 2025

GPA: 3.7/4.0

## TECHNICAL SKILLS

**Certifications:** Certified Kubernetes Application Developer (CKAD)

**Languages:** JavaScript, Go, Python, Java, SQL, C#, C

**Frameworks:** React, React Native, .NET, Node.js, Flask, MongoDB, Ruby on Rails

**Developer Tools:** Kubernetes, Docker, Amazon Web Services, Azure Cloud Services, Google Cloud Platform, Git

## EXPERIENCE

### Software Engineering Intern

June 2024 – August 2024

*Capital One*

*McLean, VA*

- Developed a **Kubernetes**-native controller in **Go** to mitigate cloud risk for 150+ **AWS EKS** clusters by surfacing and annotating **Docker** image vulnerabilities onto pods, accelerating the vulnerability remediation timeline by 50%.
- Designed a novel metric for an enterprise **New Relic** dashboard that identifies the vulnerability footprint of 22,500+ pods by generating vulnerability count histograms bucketed across 5 risk labels and exposing it via a **Prometheus** client.
- Optimized operator performance by at least 15% utilizing **AWS Lambda** for session management and templated operator deployment onto a CI/CD pipeline using **Jenkins** and **Helm**.

### Undergraduate Student Researcher

January 2024 – Present

*The Ohio State University*

*Columbus, OH*

- Engineered a pose detection algorithm to track human joint movement with 95% accuracy utilizing **Yolov8**, **OpenCV**, **Google Mediapipe**, and regression-based interpolation techniques to identify stroke symptoms.
- Drove the data-engineering process and currently training an **autoencoder machine-learning model** to flag abnormal joint movements with at least 75% accuracy.
- Optimized computation by employing image scale pyramids, resulting in a 50% reduction in run-time.

### 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, and following **Agile** methodologies.
- Implemented a semantic search and response feature to enhance the customer experience by cutting down customer service response times by around 30% utilizing large language models, vector embeddings, and an **Azure MySQL** database.
- Deployed a custom back-end web API leveraging **Azure Cloud Services**, **.NET**, and **C#**.

### Technology Lead

November 2023 – Present

*Google Developer Student Club*

*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*

*Columbus, OH*

- Drove the organizational strategy, resulting in 600+ 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 to cultivate healthy habits and explore cultures through cuisine.

## PROJECTS

### Kubefs | *Bash, Go, AWS, Azure, GCP, Docker, MongoDB, React*

May 2024 – Present

- Building a CLI tool utilizing **Bash**, **Docker**, and **Helm** to streamline fullstack application development, testing, & deployment onto local and remote **Kubernetes** clusters on **AWS**, **Azure**, & **GCP**.
- Automated workflows for multiple frameworks including **MySQL**, **Cassandra**, and **React** to reduce operational overhead.

### 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 11% 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 5<sup>th</sup>/1000 participants in Ohio State's annual Hackathon by delivering a speech-to-code editor in 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.