# Aakash Kulkarni

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# **EDUCATION**

#### Oregon State University, Corvallis

Sept 2022 – March 2025

Master's in Computer Science

GPA: 3.91/4.0

Relevant Courses: Software Engineering Methodologies, Software Evolution and Maintenance, Mobile Application Development, Parallel Programming, Database Management

# Jawaharlal Nehru Technological University, Hyderabad

Jul 2018 - Aug 2022

Bachelor's in Computer Science

GPA: 7.25/10.0

Relevant Courses: Data Structures, Operating Systems, Database Management Systems, Computer Networks

#### **EXPERIENCE**

#### Graduate Research Assistant

May 2024 - Present

College of Engineering — Oregon State University

Corvallis, Oregon

- Collaborated with a dedicated HPC research team (ANSWER LAB) to conduct fuzzing research, identifying and analyzing software bugs in scientific applications on High Performance Computing (HPC) systems. Orchestrating GenAI APIs and implementing advanced prompt engineering techniques to generate and optimize inputs for specific research applications.
- Tested REST APIs as research initiatives, focusing on methodologies and techniques to effectively identify faults.
- Configured and deployed AFL++ for fuzz testing, orchestrated job launches on HPC systems to enhance testing coverage.
- Performed differential driver testing for hardware components, checking for discrepancies and potential issues.
- · Conducted faults benchmark testing and utilized grammar-based testing approaches to identify vulnerabilities.

# Software Developer Intern

Feb 2022 - Apr 2022

Zemoso Technologies

Huderabad, India

- Architected web applications with a focus on efficient, and maintainable code using Spring Boot, MySQL, and ReactJs.
- Facilitated code reviews and utilized Git for version control to uphold software quality.
- Collaborated with a team of developers to troubleshoot and resolve software defects, enhancing product performance and reliability.

## Mobile Application Developer Intern

Jul 2021 - Sept 2021

FindMind Analytics

Remote

- Developed mobile banking app for teenagers with parental controls, using Flutter for cross-platform deployment.
- Enhanced app performance and scalability by integrating Firebase, improving speed and reliability.
- Launched the ZuPay app on iOS and Android, reaching over 10,000 users in the latest assessment.

### **PROJECTS**

## ${\bf Cuisine Quest \ - \ And roid \ Application} - \textit{Kotlin}, \ \textit{SQLite}$

 ${\rm Jan}\ 2024$  -  ${\rm Mar}\ 2024$ 

- Engineered and launched an Android application utilizing Kotlin and Spoonacular APIs to deliver a dynamic food recipe platform.
- Integrated features such as a local SQLite database for offline data storage, user preferences, filters, and custom recipe creation using Material UI, enabling users to curate and manage their culinary preferences seamlessly.

### Custom Fantasy Football — Pandas, Numpy, GCP Recipes, Hadoop

Jan 2023 - Apr 2023

- Architected a data-driven Fantasy Football Game on Google Cloud Platform using OSEMN Process, providing insights into team optimization strategies.
- Orchestrated data management with Pandas and Numpy, executed cleaning with GCP Recipes, and processed large files using Hadoop and Spark Clusters.

#### CampSite Camps — Express, React, Node, Heroku, Mongo Atlas

May 2021 - Jul 2021

- Developed and deployed a MERN Stack web application for camping enthusiasts, leveraging React for dynamic web page rendering. Facilitated user engagement by enabling trip planning and promoting outdoor activities.
- Implemented OAuth 2.0 for user authentication, and managed MongoDB Atlas for data storage.

# **SKILLS**

Languages and Frameworks Python, C++, Kotlin, JavaScript, Node, Express, Spring Boot, LATEX, Docker, Flutter, React

Databases and Cloud Technologies MySQL, MongoDB, VS Code, AWS, Google Cloud, Heroku, Firebase

Developer Tools and Software Practices REST APIs, JIRA, Agile, GitHub, Visual Studio Code

# **CERTIFICATIONS**

AWS Cloud, Certified by AICTE and Edu Skills Foundation (October 2021 – January 2022)

Coursera Certified - AWS Cloud Essential Skills, mastering AWS Cloud Practitioner tools (June 2021)

Oracle Certified - SQL, comprehensive understanding of Oracle SQL concepts (April 2020)