COKA SOMESH RAO

Hyderabad, Telangana, India
cokasomeshrao@outlook.com
+91 9030772705

EXPERIENCE

Teaching Assistantship (Full Stack Application Development)
Asian Institute of Technology   August 2023 – November 2023, Bangkok Thailand
- Spearheaded lab sessions, elevating student understanding and engagement in Full Stack Application Development, contributing to a 25% increase in average assignment grades.
- Innovatively designed and implemented tutorial classes on object-oriented programming, web development, and database management, resulting in a 15% improvement in student comprehension and performance.
- Collaborated with the course instructor to revamp lesson plans, aligning content with industry trends, leading to positive student feedback and enhanced course relevance.
- Assumed a pivotal role in exam invigilation, ensuring a fair and secure testing environment for students during assessments.

Embedded Systems Engineer
Rivin Infra Tech   March 2021 - September 2021, Hyderabad India
- Developed an embedded system with algorithms for remote patient monitoring, achieving **5-day battery life**, and 95% accuracy.
- Contributed to water-resistant jacket design, gathering **customer feedback** for product-market fit.
- Implemented battery health features in **BMS** with a 2-week time to market, enabling vital monitoring and web reporting.
- Designed optimized double-sided PCB for wearable devices, ensuring signal integrity **(>65 dBm)** for WI-FI network.

PROJECTS

PROACTIVE AUTOSCALING FOR HIGH WEB TRAFFIC ENVIRONMENTS: A TRANSFORMERS-BASED APPROACH (Master's Thesis)
Asian Institute of Technology   August 2023 -November 2023
- Presented my research work at an International conference of DSAI that took place in Bangkok.
- Created a deep learning model that performs **40% better** in comparison to **ARIMA** and **15% better** than the **random forest** algorithms, using a transformers model without a decoder for time series forecasting.
- Created two different model weekdays and calendar days for different application requirements each with a difference of at **least 20% with each other**.
- Led a comparative study of Transformers, ARIMA, and Random Forest models in the context of auto-scaling, demonstrating expertise in model evaluation and performance analysis.

Expense Tracker Android Application
Asian Institute of Technology   March 2023 -April 2023
- Developed an expense tracker application using Android Studio and Kotlin.
- Implemented features for tracking and categorizing expenses, **generating reports**, and setting budgets.
- Utilized **Firebase Authentication** and Realtime Database for secure user authentication and data storage.

Two-Tier Architecture in AWS (IAC)
Self-Project   January 2023 -January 2023
- I used Terraform to deploy a **Two-Tier Architecture** in AWS for improved scalability and separation of concerns. **Terraform** is an infrastructure as a code tool that automates deployment.
- The Two-Tier architecture consists of a Web/Application tier and a Database tier. This allows us easy maintenance and disaster recovery.

Add A Pinch (website)
Asian Institute of Technology   September 2022 – December 2022
- I developed a comprehensive food recipe website for the AIT community, utilizing **Ruby** on Rails.
- The website's functionalities include searching, filtering, and browsing through recipes and allowing users to submit recipes.
- The website was **deployed** on the **AWS cloud**.
- The website is built using PostgreSQL as the database management system, and HTML, Bootstrap, Ruby, Vim, and Linux.

EDUCATION

Master's in computer science
Asian Institute of Technology   • Bangkok, Thailand • DEC 2023 • GPA 3.08
Bachelor in Electronics and Communications
Jawaharlal Nehru Technological University   • Hyderabad, India • JAN 2022 • GPA 3.10

CERTIFICATIONS

AWS Cloud Solutions Architect Associate SAA-C03 An associate-level certificate exam is scheduled for 15/03/2023.	AWS 2024
Introduction to Containers, Kubernetes, and OpenShift	IBM 2023
Microsoft Azure Cloud Fundamentals AZ-900	Microsoft 2023
MTA: Networking Fundamentals	Microsoft 2021
Network Transformation 101	Intel® 2021
Cloud Fundamentals with GCP	Google 2021
Python Programming for the Raspberry Pi	The University of California, Irvine 2020
The Bits and Bytes of Computer Networking	Google 2020

SKILLS

Technical Skills: AWS Cloud Services, Azure Cloud, GCP, Docker, Containers, Kubernetes, Terraform, Android Studio, MS Office, MATLAB.
Languages: Python, Java, Kotlin, Ruby (Rails), SQL, C programming.
Field of Interest: Cloud Domain, DevOps, Cloud resource management, I.O.T.