Aditya Reddy Mali

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Education

Master of Science (M.S.) in Computer Science - GPA: 3.96/4.0 Jan 2022 - Dec 2023
Arizona State University, Tempe, Arizona.
Relevant Coursework: Cloud Computing, Data Processing at Scale, Mobile Computing, Data Mining, Software Security

Bachelor of Technology (B.Tech.) in Computer Science - GPA: 7.37/10.0 Jun 2017 - Aug 2021
Amrita School of Engineering, Coimbatore, India.

Technical Skills

Programming & DB: Java, Python, C, C#, PostgreSQL, SQLite, MySQL, MongoDB
FrontEnd/BackEnd: Node.js, React.js, Flask, HTML, CSS, Bootstrap, XML, Nginx
Tools: Git, AWS, Jira, Intellij, Android Studio, Docker

Certification: AWS Solutions Architect – Associate

Work Experience

Tata Consultancy Services, Hyderabad, India Oct 2021 - Dec 2021
System Engineer

- Worked on a cloud application using **AWS** technologies: S3, Lambda, DynamoDB. It takes videos as input, performs face recognition using OpenCV, looks them up in **DynamoDB**, and returns the relevant information.
- Designed a scalable architecture across multiple Availability Zones, optimizing workload distribution, reducing downtime, and delivering optimal performance to the users. Leveraged AWS Auto Scaling and Elastic Load Balancing to efficiently allocate resources based on demand.
- Applied **Agile/Scrum** methodology and **Jira** to manage and track user stories, ensuring efficient project delivery and alignment with stakeholder requirements. Proficient in all phases of the Agile Software Development Life Cycle (SDLC).

Notiontag Technologies, Chennai, India Apr 2020 - May 2020
Android Developer Intern

- Developed apps using **PyTorch**. Built an application that swiftly updates and fetches records from **SQLite** database.
- Worked on a client-side application that uses an image recognition **API** to detect if a person is wearing a mask and sends data to the server using Multipart and **NodeJS**.
- Decompiled applications to assess the flaws and vulnerabilities using Apktool.

Research Experience

Water Quality Analysis Using Remote Sensing Jun 2021 - Sep 2021

- Surface reflectance values are captured using Landsat satellite images and are used to estimate the chlorophyll fluorescence parameter of water. The Regression Models are built to estimate the chlorophyll fluorescence parameters.
- Linear and Ridge Regression models perform well compared to Lasso Regression. From the results, Ridge regression model with an alpha value of 0.5 can be used as a model to estimate the Chlorophyll Fluorescence value. Published in "ICICCT 2022"

Detection of DoS and DDoS attacks using Hidden Markov Model (HMM) Dec 2020 - May 2021

- This project was funded by IBM at the university. Trained an HMM model to detect DDoS & DoS attacks. HMM got an accuracy of **92.11%**. HMM was able to detect more packets than generic machine learning algorithms.
- This model can be deployed in a cloud and can be used as a web service, for variety of datasets available with the developer. Published in "ICICCT 2021"

Academic Projects

Image Recognition as Service Jan 2023 - May 2023

- Implemented a **Cloud App** using **AWS** IaaS technologies, where a **Flask** web-tier EC2 instance checks for **POST** requests.
- Sends these requests to the SQS queue & stores the images in S3 buckets for the **Python** App-tier instances to process.
- Load balancing - Created alarms for scaling in and out, along with step-scaling policies used for AutoScaling & instances to pick new requests in the queue.

Secure Health System Aug 2022 - Dec 2022

- Worked on a hospital management system **Web App** using **React.js**, Bootstrap, **Python**, Flask API, **MongoDB**, **Redis**.
- Implemented advanced security measures, including **JWT** authentication, field-level encryption in the blockchain, and **E2EE** of payload for network communication, ensuring secure and confidential handling of sensitive patient data.
- Significantly enhanced healthcare processes by automating information passing, record-keeping, and retrieval, optimizing workflows for hospital staff, leading to increased productivity and seamless information access.

Covid Symptom Monitor Aug 2022 - Dec 2022

- Developed an **Android App** that collects COVID-19-related symptoms & performs location logging of every user, and stores them in a local machine through the **Nginx** server.
- Computed heart and respiration vitals using the time series data from core graphic (camera) & accelerometer.