ADITYA MADHUSUDHAN

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Computer Science engineer currently pursuing master's in computer science with 2+ years of experience building full-stack applications as Software Developer across diverse domains. Eager to leverage expertise and contribute to transformative projects in a challenging software development role.

Education

Florida State University, GPA – 3.61/4   **Tallahassee, FL, USA**
Master's in Computer science   *August 2022 – May 2024*
Courses: Advance Database Systems, Advance Operating Systems. Analytical Methods, Data Mining, Deep and Reinforcement Learning, Data Science, Network Security, Artificial Intelligence.

Visvesvaraya Technological University (VTU) GPA – 3.0/4   **Bangalore, KA, India**
Bachelor's in Computer Science and Engineering   *July 2017 – July 2021*

Work Experience

FSU Office of Distance Learning   **Tallahassee, FL, US**
Application Developer   *October 2023 – Present*
- Developed a full stack proctor scheduling application product utilizing the tech stack **Next JS**, **Python, Flask API, and MongoDB NoSQL** technology to improve resource allocation by 50% in the testing and assessment office.

Grassroots-GRSSL   ***Bangalore, KA, IN***
Software Engineer   *August 2021 – April 2022*
- Architected complex technical product customer-relationship products leveraging **React JS, Java, SpringBoot, JavaScript, NodeJS and MySQL and Mongo** architecture**,** resulting in a notable 2x increase in Business Product efficiency.
- Applied **large-scale data aggregation and processing techniques with Java and SpringBoot** packages to enhance customer retention rates and satisfaction indices for a restaurant franchise, leading to a remarkable 25% increase in dine-in.
- Defined automated **data reporting and data processing** algorithms as API services using **Java SpringBoot and Node TypeScript** to facilitate real-time updates and data retrieval, catering to various 6 business applications.
- Optimized, diagnosing, troubleshooting, and resolving **backend Perl, shell scripts and Python** services through performance issue tuning and complex environment refactoring, resulting in a 40% reduction in data processing time.
- Executed the setup of **CI/CD** processes utilizing **Docker** for containerization on **AWS** cloud-native distributed systems, uniting **Blob storage, SQL**, and **Virtual Machines** to drive 20% efficiency enhancements and scalability improvements.

Oxyease Healthcare Services pvt Ltd   ***Bangalore, KA, IN***
Software Development Intern   *February 2021 – June 2021*
- Planned and designed a robust medical inventory management system utilizing in fast-paced environment **React, JavaScript NodeJS, and MySQL** architecture, streamlining inventory tracking and delivery management processes.
- Devised **API services in, Java, SpringBoot** handling subscriptions and renewal for over 10 different types of products.

Marek Adventures   ***Bangalore, KA, IN***
Software Development Intern   *October 2020 – December 2020*
- Innovated and built a visually appealing and responsive **UI/UX front end** web site for an African touring firm using **WordPress, HTML and JS**, increased **SEO** ensuring 2x the online presence.

Esilicon TechnoDesign Private Limited   ***Bangalore, KA, IN***
Software Development Intern   *July 2020 – September 2020*
- Defined data preprocessing algorithms capable of handling 2GB of data before updating **SQL** and **NoSQL** databases.
- Processed and deployed the algorithms in, **Node, Express JS RESTful API** to triggers in failing details and error logging in semiconductor machinery, provided a 20% better inventory analysis.

Freelance

NH Robotics   *Freelance Software Engineer*
- Collaborated on backend **Robot Operating System (ROS server and bridge C++ and ROS packages**, facilitating communication between the robot and the wireless server, and developed a frontend interface using **React JS**.
- Created backend services to conducted **data analytics using Python** packages to predict faulty robot parts, and modelled services for **predicting collision distance and generating maps using image, IoT, and LiDAR data streams**.

Software Projects

Edge-Disjoint Partitioning
Implemented a novel research paper algorithm using **Java** programming paradigms to calculate shortest path in directed weighted graphs and sub-graphs, which eliminated the need for prior data pre-processing, enhancing computational efficiency by 40%.

Image compression using Auto-Encoders
Trained four Auto-Encoder neural network models on four image datasets using **torch modules, tensor arrays, Python, and Binary Cross Entropy (BCE) Loss** for both network construction and validation.

Skills

Programming: JavaScript ES6, Java, Python, C#, HTML/CSS, TypeScript, JSON, JQuery, XML, Swift, Perl, C++.
Application Frameworks: NodeJS, React JS, React-Native, Next JS, Springboot, Spring MVC, Hibernate, Microservices, AngularJS, Git, Django, ExpressJS, FastAPI, Flask, PyTorch, TensorFlow, NumPy, Pandas, Docker, ASP.Net, ASP.Net Web Forms, Linux, JIRA, Agile, SCRUM, Kanban, Linux, AJAX, Tomcat, IntelliJ IDE, VS Code, VS Studio.
Databases: MySQL, MongoDB, DynamoDB, S3 Bucket, OracleDB, CosmosDB, MongoAtlas, SQL Server, PL/SQL, OCI.
Cloud Services: AWS Lambda, Elasticsearch, Cloud Watch, Amplify, API Gateway, Vercel, Heroku.