Aditya Jayanti

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Education

Master of Science in Computer Engineering September 2023-Present
University of Washington Washington
Bachelor of Technology in Electrical and Electronics Engineering July 2018-May 2022
National Institute of Technology Puducherry India

Work Experience

Software Engineer & Testing Assistant, University of Washington January 2024-Present

- Redesigned and upgraded the Integrated and Facilities Services Department website at the UW using React, Python, HTML, and CSS, improving its CSS, improving its functionality, user experience.
- Conducted machine learning model evaluation for fault analysis in power systems under Professor Jie Sheng, utilizing Logistic Regression and Support Vector Machines (SVM) for accurate fault detection and classification, ensuring improved operational efficiency through detailed testing and validation.

Advanced Application Analyst, Accenture October 2022-October 2023

Application Discovery Suite- (Java, Springboot, JDBC, MySQL, AWS, HTML, CSS, ReactJS, Angular).

- Engineered core functionalities by crafting Controller and Service classes using Spring Boot and Java, delivering robust RESTful web services.
- Integrated the Spring Framework with Hibernate to enhance data access operations, fostering seamless interaction between business logic and database layers while improving query execution speed by 40% and minimizing overhead.Increased the unit test coverage from 30% to 70% using JUnit and Mockito framework to improve code quality and early bug detection.
- Generated automated workflows integrating CI/CD processes for deploying applications in a containerized environment powered by Docker orchestrated through Kubernetes on Amazon Web Services, saving approximately five hours per release cycle.

Inventory Management System- (HTML, CSS, Python, Javascript, ReactJS).

- Implemented a responsive user interface using HTML, CSS, and JavaScript, improving the seller experience. Developed a robust backend with Node.js and Express, creating RESTful APIs to streamline CRUD operations for managing product data. Additionally, optimized the MySQL database schema and applied caching strategies, leading to a 15% reduction in query response times.
- Led the design and optimization of the MySQL database schema, enhancing data storage and retrieval efficiency. Utilized Microsoft Azure for application hosting, ensuring high availability and scalability to meet growing user demand.

Internship

Research Intern, **NIT AP-** (Python, OpenCV, CNN). June 2020-August 2020

- Involved in the development of an intelligent system to detect face masks using image processing techniques and deep learning algorithms.
- Utilized Pandas and NumPy for data preprocessing and implemented machine learning algorithms using Scikit-learn to develop a face mask detection system. Employed Logistic Regression, Convolutional Neural Networks (CNN), to accurately classify mask presence.

Projects

Hospital Management System- (Java, Springboot, JDBC, MySQL, AWS, HTML, CSS, JavaScript, NLP).

- Simplified a dynamic web application using Java, JSP, and MySQL, featuring a user-friendly interface for appointment management.
- Initiated a robust AI chatbox leveraging natural language processing to enhance appointment scheduling efficiency, achieving smooth interactions for over 5,000 users per month and increasing overall operational productivity in backend development.

Student Directory- (Java, Springboot, JDBC, MySQL, React, HTML, CSS, JavaScript).

- Created an advanced web application utilizing Java technologies that analyzed tracking of vital details for more than 3,000 students; ensured accurate record-keeping through efficient organization of contact info and geographical data sets.Led the project design, development, maintenance, and monitoring of backend services, REST APIs, and user interfaces, utilizing Java for backend development and React for UI design.

Research & Publications

Fault Analysis on Multi-Terminal System Using Wavelet Morphing and Machine Learning Technique. (International Journal of Engineering Education)

- The goal of my research is to explore the application of machine learning algorithms in conjunction with wavelet morphing techniques to improve fault detection and classification in multi-terminal power systems.
- The system is Investigated to precisely locate the faults within the network significantly reducing downtime and enhancing operational efficiency.
- It integrates machine learning techniques to not only identify the occurrence of faults but also categorize them based on their nature and origin.

Skills

Programming Languages: Java, Python, C++,C#, Bash, .NET.
Web Development: JavaScript, TypeScript, HTML, CSS, Bootstrap.
Databases: MySQL, NoSQL, Redis, MongoDB, Oracle Database, PostgreSQL.
Technologies & Framework: Rest API, Angular, NodeJS, ReactJS, Spring Boot, Power Mockito, Jenkins, Docker, Kubernetes, NumPy, Pandas, OpenCV, Matplotlib, Keras, Apache Tomcat, CI/CD Pipelines,Git, Linux, Selenium.
Concepts: Object Oriented Programming, Machine Learning, LLM, ANN, MVC, Agile, CNN, Cloud Computing, Design Thinking, Generative AI, Power BI.
Cloud Services: AWS(Lambda, RDS, API Gateway, EC2, S3, CloudWatch), Azure IoT, Azure SQL DB, Microsoft Azure IoT.

Certifications & Achievements

- **AWS CLOUD PRACTITIONER**- Amazon Web Services
- **Java**- Hacker Rank
- **SQL**- Hacker Rank
- **Python** –Google
- Awarded **Most Valuable Teammate(MVT**) Award in acknowledgement of my contributions to the Application Discovery Suite team in Accenture.