Mounika Cheera

Software Engineer

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Professional Experience

Graduate Research Assistant, **UMBC** *Aug 2022 – May 2024*

- Designed and implemented a scalable web-based portal to streamline assignment submissions, grading processes, and statistical reporting for undergraduate courses. The platform served as a centralized system for instructors, TAs, and students.
- Developed features for seamless assignment uploads, customizable grading rubrics, and automated statistical reporting of student performance; integrated role-based access for instructors and TAs; and optimized database queries for efficient data handling across semesters.
- Reduced grading workload for TAs by 40%, improved turnaround time for feedback to students, and provided instructors with actionable insights into class performance trends through automated reporting.
- **Technologies Used:** React, PostgreSQL, Express.js, Node.js.

Programmer Analyst Trainee, Cognizant *Aug 2021 – Aug 2022*

- Developed an automated reconciliation system using Informatica PowerCenter to integrate and reconcile financial transactions across multiple platforms, ensuring data accuracy, consistency, and regulatory compliance.
- Designed and implemented ETL pipelines for extracting, transforming, and loading transactional data from heterogeneous sources, developed reconciliation workflows with sophisticated matching algorithms, and configured exception handling mechanisms to flag and resolve discrepancies.
- Streamlined financial operations by automating reconciliation processes, ensuring reliable data integration across systems. Delivered high-precision reports and insights to identify trends and make informed, timely decisions with confidence.
- **Technologies Used:** Informatica PowerCenter, Oracle Database, SQL, PL/SQL, Python, Talend Open Studio, Tableau.

Full-Stack Developer, 27 Architects *Jan 2021 – Aug 2021*

- Developed a comprehensive expense management system tailored for an architectural firm to streamline internal invoicing and expense tracking. The system calculated invoices based on employee work hours and managed travel, lunch, and additional expenditures. It also included monthly expense visualizations and comparative analytics for better financial oversight.
- Followed a modular development approach by designing a RESTful API layer for secure data flow and a PostgreSQL database schema to handle structured expense records. Used React.js for creating user-friendly interfaces and integrated real-time data visualization libraries for expense analytics.
- Introduced new levels of transparency and accountability, allowing stakeholders to access detailed expense insights, improving financial decision-making across projects.
- **Technologies Used:** React.js, Node.js, PostgreSQL, Heroku.

Languages and Technologies

● Languages: Python, SQL, PL/SQL, JavaScript, HTML5, CSS3
● Tools/Frameworks: React.js, Redux, Node.js, Express.js, PostgreSQL, Kubernetes, Oracle, Informatica, Talend, Tableau
● Platforms/Technologies: AWS, Heroku, Git

Education

M.S. in Information Systems, **UMBC** *Aug 2022 – May 2024*

Key Projects:

- **Healthcare Fraud Detection:** Developed machine learning models (logistic regression, decision trees, random forests) to analyze healthcare claims and detect fraud, leveraging Python and anomaly detection techniques.
- **Human Activity Recognition:** Processed accelerometer data to classify human activities using optimized ML models (decision trees, random forests, SVM), with Python and feature engineering.

B. Tech in Computer Science and Engineering *Aug 2018 – Jul 2022*

Malla Reddy College of Engineering and Technology

Key Project:

Sign Language to Speech Translation: Designed a deep learning model with TensorFlow/Keras to recognize ASL gestures, integrated with OpenCV for real-time processing, and combined with a speech synthesis model to enable audible communication.