Dhawal Modi

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Education

University of California - Merced   Expected May 2025
Masters of Science in Electrical Engineering & Computer Science (GPA: 3.85 / 4.00)   *Merced, California, US*
- **Relevant Coursework:** Deep Learning, Reinforcement Learning, Computer Architecture & Design, Signal Processing for IoT Devices

Rajiv Gandhi Proudyogiki Vishwavidyalaya   Jul 2016 - Jun 2020
Bachelors of Engineering in Electronics & Communications Engineering (GPA: 3.27 / 4.00)   *Bhopal, Madhya Pradesh, India*
- **Relevant Coursework:** Computer System Organization, Operating Systems, Microprocessor & Microcontrollers, Wireless Communications

Experience

Tata Consultancy Services Limited   Nov 2020 – Jul 2023
Systems Engineer   *Bangalore, Karnataka, India*
- Implemented and streamlined validation routines for Outward Direct Debits and Credit Transfer payment channels, streamlining interface development as per FPS and HKICL specifications. This enabled high-efficiency processing, handling up to **100,000 transactions per minute.**
- Guided design discussions with clients and users on Inward/Outward Direct Debit modules, crafting specifications and design documents for developers and module testers.
- Completed the integration of Spring REST API Client with external services, enhancing real-time bill payment processing. Led the creation of microservices architecture for rapid API prototyping, ensuring flawless delivery to System Integration Testing and production environments.
- Led a cross-functional team of 3 SDETs in implementing a Spring Boot API testing pipeline across 3 testing regions, resulting in a **20% increase** in code delivery velocity.
- Designed and created an automated testing framework for **15 user stories** and application flows using Jbehave BDD Framework, significantly improving regression testing efficiency.
- Optimized Oracle SQL database queries, reducing Direct Debit and Credit Transfer Payment file upload times by **15%** and enhancing overall application performance.
- Adhered to required SLAs by promptly integrating Change Requests into Spring API client within a 48-hour timeframe.

Eminere Tech Solutions   Jul 2018 – Jan 2020
Co-Founder & Developer   *Bhopal, Madhya Pradesh, India*
- Led a team of 5 developers in developing a Computer Vision-based Road Traffic Control System utilizing Windows MFC, C/C++, and OpenCV.
- Developed a real-time Vehicle Recognition using Haar Cascade Algorithm achieving an 80% accuracy.

Projects

Dynamic Traffic Management | *C++, OpenCV, Arduino*
- Designed a Dynamic Traffic Management system utilizing Windows MFC, C/C++, and OpenCV
- Implemented a Real-Time Vehicle Recognition system using Haar Cascade Algorithm in OpenCV achieving an 80% accuracy and integrated with traffic light controller logic.

Binary Classification with a Bank Churn Dataset | *Python, Scikit, Seaborn, Matplotlib, Jupyter Notebooks*
- Built a Binary Classifier to predict churn using XGBoost giving an ROC-AUC percentage score of 88.5%.
- Created data visualizations for the training dataset using Python and Seaborn library uncovering patterns in the dataset.

Technical Skills

Languages: Python, Java, C++
Technologies: Django, Flask, Spring Boot, PyTorch, Oracle SQL, IBM Db2, Shell Scripting, CUDA, Matlab, LaTeX