

# Dev Mulchandani

San José, CA

+1 4085911830 | [devchandralal.mulchandani@sjsu.edu](mailto:devchandralal.mulchandani@sjsu.edu) | <https://www.linkedin.com/in/dev-mulchandani/>  
<https://github.com/DMgaming00>

## Summary

Master's student in Data Science with strong experience in SQL-driven analytics and structured healthcare data modeling. Skilled in applying statistical validation and GenAI tools to solve complex financial mapping problems. Curious, detail-oriented, and motivated to deliver actionable insights in healthcare finance environments.

## Education

### San José State University (SJSU)

May 2027

*Master of Science, Computer Software Engineering*

- GPA: 3.6

### G H Raisoni College of Engineering

*Bachelor of Engineering, Information Technology*

- GPA: 3.8

## Experience

### Centre of Excellence for Information Security, GHRCE

Jul 2024 - Dec 2024

#### AI/ML Engineer Intern

- Designed and deployed a **Python-based distributed Command & Control system** augmented with ML-driven analytics to monitor and manage **100+ client nodes** in real time.
- Developed data ingestion and feature-extraction pipelines with AWS Lambda and PyTorch that process system logs and network signals, enabling ML-assisted anomaly and threat detection and shortening detection time for security incidents
- Implemented secure, token-based authentication and encrypted communication, reducing unauthorized access risk by **50%**, while ensuring data integrity for downstream ML models.
- Deployed monitoring and inference services on **AWS EC2 and CloudWatch**, achieving **99.9% uptime** and improving threat detection latency by **20%**.
- Built automated alerting and logging pipelines with AWS CloudWatch, DynamoDB, and Lambda to support scalable, fault-tolerant ML-enabled monitoring, which improved incident-response speed

### Oasis Infobyte

Mar 2024 - Jun 2024

#### AI/ML Engineer Intern

- Built an **AI-driven customer support automation system** using **BERT embeddings and OpenAI GPT APIs**, reducing manual ticket resolution time by **60%**.
- Trained, evaluated, and tuned **multi-class NLP models** with Scikit-learn and Hugging Face Transformers, achieving **92% classification accuracy** across customer issue categories.
- Designed end-to-end ML pipelines on AWS SageMaker and Lambda, using Pandas for text preprocessing, BERT embeddings for feature generation, and FastAPI for model inference, which cut processing latency by half and ensured consistent daily ticket handling
- Integrated the trained ML models into a React + FastAPI dashboard hosted on AWS Lambda, delivering real-time ticket triage and sentiment analysis that reduced agent response time and improved customer satisfaction
- Deployed and versioned models using **AWS SageMaker and Lambda**, implementing CI/CD pipelines to enable reliable experimentation and rapid iteration.

## Projects

### Healthcare Revenue Mapping & AI Classification Prototype

- Built SQL-based analytical workflows to standardize and analyze large hospital financial datasets
- Developed statistical validation models to evaluate mapping accuracy and data quality
- Prototyped a custom GPT to automate account classification and reduce manual mapping effort
- Presented findings and actionable insights to stakeholders in clear, business-focused summaries

### Auto Data Cleaning & Feature Engineering Toolkit

- <https://github.com/DMgaming00/Auto-Data-Cleaning-Toolkit>
- Developed an **end-to-end ML preprocessing system** that profiles datasets, cleans anomalies, engineers features, and exports ML-ready pipelines.
- Built modular Scikit-learn pipelines for imputation, outlier detection (IQR, Isolation Forest), encoding, and scaling.
- Created an interactive **Streamlit application** for dataset upload, visualization, and pipeline export.
- Improved downstream model accuracy by **3–5%** on benchmark datasets while significantly reducing manual data-cleaning effort.

### Predictive Maintenance Using Machine Learning

- Trained classification and regression models on industrial sensor data to predict component failures with **93% accuracy**.
- Implemented real-time anomaly detection dashboards using Streamlit and simulated IoT data streams.
- Applied SHAP for interpretability to identify key predictive signals.

## Technical Skills

- **Programming:** Python, Java, C++, SQL
- **Machine Learning and AI:** Scikit-learn, PyTorch, TensorFlow, Transformers, NLP, CNNs, Model Evaluation, Feature Engineering
- **GenAI:** OpenAI APIs, LangChain, RAG systems, Prompt Engineering
- **Data & Analytics:** Pandas, NumPy, SHAP, Power BI
- **Cloud & MLOps:** AWS (EC2, Lambda, SageMaker, DynamoDB, CloudWatch), Docker, CI/CD (GitHub Actions)
- **Web & APIs:** FastAPI, REST APIs, React, Node.js
- **Tools:** Git/GitHub, Linux, Jupyter, Streamlit

## Certifications

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- Machine Learning Specialization - Stanford University & DeepLearning.AI
- AWS: Introduction to Generative AI