

# Mohit Phulwani

San Jose, CA | (203) 727-8845 | [mohitphulwani001@gmail.com](mailto:mohitphulwani001@gmail.com) | [LinkedIn](#) | [Website](#)

## PROFESSIONAL SUMMARY

Data Engineer with a **Master's in Analytics (3.9 GPA)** and **15+ months** of experience in architecting and **orchestrating** production-grade data systems. Specialist in **Data Observability and Governance**, utilizing **SQL and Python** to conduct deep-dive **Root-Cause Analysis (RCA)** on **scalable distributed pipelines**. Expert in optimizing legacy database objects (**Stored Procedures, Views**) and **automating data validation** to eliminate manual auditing. Proven ability to bridge the gap between raw data infrastructure and executive-level BI reporting.

## TECHNICAL SKILLS

- **Languages:** SQL (T-SQL, PostgreSQL, MySQL), Python, R, JavaScript (Node.js).
- **Data Engineering:** ETL/ELT Pipeline Development, Data Modeling (Schema Design), Data Quality (DQ) Testing, Query Optimization, Root Cause Analysis (RCA).
- **Tools & Cloud:** AWS (S3, Redshift), Supabase, Git/GitHub, VS Code, SSRS, Power BI, Excel (Advanced).
- **Libraries:** Pandas, NumPy, FastAPI, PyTorch, Scikit-learn, Streamlit.

## WORK EXPERIENCE

<b>Data Engineer (Graduate Assistant), Sacred Heart University, Connecticut</b>	Oct 2024 – Dec 2025
<ul style="list-style-type: none"><li>• <b>Data Quality &amp; Observability:</b> Owned the end-to-end troubleshooting lifecycle for institutional reporting; performed <b>Root-Cause Analysis (RCA)</b> on data discrepancies by auditing complex T-SQL joins and stored procedures, ensuring <b>100% data fidelity</b> for federal compliance.</li><li>• <b>Pipeline Optimization:</b> Refactored legacy SQL views and optimized indexing strategies within a <b>Microsoft SQL Server</b> environment, resulting in a <b>32% reduction in query execution time</b> for high-traffic dashboards.</li><li>• <b>Automated Validation:</b> Engineered <b>Python-based testing scripts (Pandas/NumPy)</b> to automate <b>Exploratory Data Analysis (EDA)</b> and validation checks, reducing manual data-reconciliation efforts by <b>14+ hours per week</b>.</li><li>• <b>Process Automation:</b> Spearheaded the migration of manual data entry workflows to <b>automated ETL pipelines</b>, handling <b>15,000+ student records</b> and eliminating human error in the "admissions-to-finance" data handoff.</li><li>• <b>System Integration:</b> Developed a modular suite of <b>50+ automated SSRS reports</b>, identifying and resolving bottlenecks between the <b>SQL database layer</b> and the <b>Visual Studio</b> front-end.</li><li>• <b>Technical Liaison:</b> Translated ambiguous business logic from Finance and Admissions stakeholders into <b>12 precise technical schemas</b>, reducing development rework by <b>18%</b>.</li><li>• <b>Financial Modeling:</b> Developed economic forecasting tools using Price Sensitivity modeling to simulate 10,000+ aid scenarios, identifying a <b>\$120K optimization</b> in institutional spending.</li></ul>	

## ENGINEERING PROJECTS

### Orbit – Offline-First Data Sync Engine | React Native, FastAPI, PostgreSQL

- Architected a cross-platform data synchronization suite featuring a custom conflict-resolution engine and a local SQLite persistence layer to ensure 100% data availability in offline environments.
- Implemented **JWT-based session management** and secure **REST API endpoints via FastAPI** to handle concurrent user synchronizations.

### In-Cabin Seat Object Detection (SVIRO) | Python, YOLOv8, PyTorch

- Developed a high-performance **Computer Vision pipeline** for synthetic occupancy detection, achieving a **55.70% mAP@50** across 5 different model architectures.
- Engineered a **data augmentation pipeline** to resolve class imbalances, improving model accuracy in edge-case synthetic environments.

## EDUCATION

<b>Master of Science in Analytics (Data Science focus)</b> , Sacred Heart University, CT (GPA: 3.9/4.0)	Aug 2024 – Dec 2025
<b>Bachelor of Arts in Economics</b> , University of Mumbai	Jan 2021 – Feb 2024
<b>Diploma in Electronics and Communication Engineering</b> , VES Polytechnic, University of Mumbai	

## CERTIFICATIONS & ACHIEVEMENTS

- **IBM Data Science Professional Certificate:** Specialized in data visualization, machine learning, & structured query language.
- **Bloomberg Market Concepts (BMC):** Proficient in financial market data analysis and economic indicators.
- **Lead Researcher:** Engineered a high-performance AI-driven data pipeline using XGBoost and SHAP; automated the analysis of behavioral datasets to drive real-time intervention strategies.