

KSHITIJ SURENDRA PANCHAL

[Kshitij Panchal](#) | 8291348147 | kshitij.panchal043@nmims.in

EDUCATION

Master of Data Science

Nilkamal School of Mathematics, Applied Statistics and Analytics, SVKM's NMIMS, Mumbai

2024 - 2026

CGPA 8.0 /10

Bachelor of Science in Mathematics

Wilson College

2021 - 2024

CGPA 7.40 /10

Higher Secondary - 12th

Wilson College

February 2020

Percentage- 54.74%

Secondary School- 10th

St Xavier's High School

March 2018

Percentage- 73.80%

PROJECTS

Qwen-Based Multimodal RAG System for PDF and DOC Analysis

Oct 2025 – Nov 2025

- Developed an AI-powered **RAG system** for document Q&A using **Qwen2.5-VL**, **Docling**, and **ChromaDB**.
- Enabled text-image understanding with **92% retrieval** precision via **hybrid MiniLM-L6-v2 embeddings**.
- Built a **Streamlit UI** for interactive query responses with contextual citations.

NETRAI- Road Accident Detection and Severity Analysis using Deep Learning

Dec 2024 – Apr 2025

- Developed a real-time road accident detection system using **YOLOv12** for CCTV footage analysis, achieving **83.3% F1- Score** and **0.76** mean IoU, outperforming **YOLOv11** and **Faster R-CNN** in live detection accuracy.
- Integrated severity analysis with **Gemini 2 Flash** and stored annotated accident data in Firebase for immediate access.

Book Recommendation System

Jan 2025-Feb 2025

- Engineered a **collaborative filtering model** using **270K+** ratings; achieved **RMSE of 0.89**.
- Deployed model using **AWS SageMaker**, **CodePipeline**, and **Elastic Beanstalk** for **CI/CD**.
- Tackled cold-start issues with a **hybrid content-based** fallback system.
- Ensured scalability and robustness by storing models and data on **AWS S3**

Currency Exchange Rate Forecasting using Advanced Time Series Models

Nov 2024-Dec 2024

- Developed a comprehensive currency forecasting pipeline for **EUR/INR**, achieving a **2.59% MAPE** with a **Prophet model**.
- Modeled market volatility using **GARCH/EGARCH** (achieving a best **AIC score of 921.1**) and analyzed inter-currency dependencies with **VAR** to provide actionable insights for risk management and trading strategies.

OLIST E-Commerce Analytics

Aug 2024-Sept 2024

- Built interactive dashboards in **Power BI** and **Tableau** to visualize sales trends, customer behavior, and product performance.
- Applied advanced analytics and **KPIs** to uncover insights on customer retention and profitability, aiding strategic decisions.
- Enabled real-time performance monitoring through automated data pipelines and dynamic visual storytelling.

POSITIONS OF RESPONSIBILITY

2022-2023

- Project Coordination:** Assisted in planning and executing multiple college math events, workshops, and competitions.
- Stakeholder Management:** Collaborated with organizers and faculty to promote mathematical engagement and ensure successful event coordination.

EXTRA CURRICULAR ACTIVITIES

Interests

Trekking | Art | Travelling | Gaming & Sports

CERTIFICATIONS

Data Analyst from EXCELR | [link](#)

2023-2024

SKILLS

- Professional Skills:** Communication, Teamwork, Storytelling through Data, Problem Solving, High Attention to Detail, Project Coordination, Stakeholder Management
- Technical Skills:** Power BI, Tableau, SQL, MS Office Suite, Python, AWS

NILKAMAL SCHOOL OF MATHEMATICS, APPLIED STATISTICS AND ANALYTICS, SVKM's NMIMS, MUMBAI