

Mangesh Patil

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WORK EXPERIENCE

OGMA Risk and Analytics

New York, United States

Data Scientist

Jan 2023 - Present

- Developed and optimized credit risk models using **Logistic Regression**, **XGBoost**, **WOE Bucketing**, and **VIF-based Feature Selection**, improving the accuracy of borrower risk assessments for a lending platform.
- Delivered an AUC-ROC of 0.933, **KS Statistic** of 0.730, and **Gini Coefficient** of 0.866, resulting in a 10% reduction in defaults and more reliable loan approval decisions.
- Conducted **stress testing** and scenario analysis to **simulate extreme market conditions** and economic **downturns**, assessing potential **risk exposure** and informing **risk mitigation** strategies.
- Leveraged **NLP** techniques to analyze **unstructured data** from news, social media, and **financial reports**, identifying **emerging risks** and shifts in **market sentiment**.

Changing the present

New York, United States

Data Analyst

Aug 2024 - Present

- Customer Insights & Data Analysis:** Analyzed donor **behavior** and **transaction** data to enhance **marketing strategies**, driving a 15% increase in **engagement**. Utilized **data mining**, **SQL** and **AWS Redshift** to extract and **transfer** data to **AWS S3** for further analysis.
- Visualization & Reporting:** Developed interactive **Tableau** dashboards and reports to track **fundraising performance**, **monitored donation trends**, and evaluated **strategic impacts**, enabling data-driven decision-making.

Outlier

New York, United States

AI Training Specialist

Sep 2022 - Present

- Monitored and evaluated model performance** using **key metrics** to identify opportunities for refinement and retraining, ensuring continuous model improvement and alignment with evolving business objectives.
- Created and implemented prompt engineering strategies** to optimize **LLM performance** in production, increasing the model's ability to provide **contextually relevant**, accurate, and **human-like** responses.

JPMorgan Chase & Co. Quantitative Research Virtual Experience Program

New York, United States

Quantitative Research Analyst

Nov 2024 - Dec 2024

- Developed a **credit risk** evaluation model using **logistic regression** to predict **loan defaults**, achieving an **85% accuracy** and **0.90 AUC** and enhanced loan approval process, reducing default rates by **15%**.
- Applied K-means clustering to segment FICO scores into 10 buckets, improving predictive accuracy and credit decision-making.

Extern

New York, United States

(Beats by Dre – Consumer Insights)

Sep 2024 - Dec 2024

- Conducted **sentiment analysis** using Python, **VADER**, and **Gemini AI** to assess product strengths and weaknesses, guiding a **product improvement** initiative that contributed to a 25% increase in customer satisfaction.

(Expedia – Digital Advertising Insights)

- Analyzed **digital advertising strategies** of travel industry **competitors**, identifying effective strategies leading to an 8% increase in ROI.

Manifest Tech Media

Remote, India

Data Scientist

Jul 2021 -Jul 2022

- Credit Risk Modelling:** Developed and refined **credit risk models** for an instant loan platform targeting **working students**, analyzing **financial behavior**, **statistics** and repayment history to **reduce defaults** and improve the accuracy of loan approvals.
- Segmentation & Strategy Development:** Implemented data-driven **borrower segmentation** based on income, spending habits, and credit profiles to tailor loan offerings, resulting in a 15% boost in user engagement and **increased loan repayment** rates.

Mahanagar Telephone Nigam Limited

Mumbai, India

Junior Data Scientist

Jun 2019 - Jul 2021

- Led **churn prediction** modeling and optimization, reducing **churn** rates by 3% by targetting **high-risk customers**.
- Engineered **RFM analysis**, improving targeted **marketing strategies** and customer engagement by 5% doing ROI analysis.

EDUCATION

Pace University, Seidenberg School of Computer Science

New York, United States

Master of Science in Data Science

May 2024

University of Mumbai

Mumbai, India

Bachelor of Engineering in Electronics Engineering

May 2022

PROJECTS

Rule-Based Fraud Detection with Apache Airflow & Spark

- Designed a rule-based fraud detection system** using Apache Airflow, Spark SQL, and Python to analyze transaction data.
- Leveraged Apache Airflow for workflow orchestration**, automating the daily execution of data processing and fraud detection tasks.
- Containerized the entire system using Docker**, ensuring scalability, and seamless deployment across different environments.
- Processed large-scale transaction data with Spark SQL**, optimizing queries for real-time fraud detection on high-volume datasets.

TECHNICAL SKILLS

- Programming Languages:** Python (Intermediate), SQL (Advanced), R (Basic), SAS
- Data Analytics & Data Visualization:** Pandas, NumPy, Matplotlib, Seaborn, Tableau, and Power BI
- Statistical Analysis:** Hypothesis Testing, Regression (Linear, Logistic), Clustering, Time Series Analysis (ARIMA), ANOVA, and Bayesian Methods, Chi-Square test, A/B Testing
- Machine Learning:** sci-kit-learn, Forecasting, Multivariate regression TensorFlow, Keras, XGBoost, Random Forest, SVM ARIMA, and KNN clustering
- Cloud Platforms:** Microsoft Azure (AI & ML), AWS (S3, EC2, SageMaker), and GCP (BigQuery, AI tools).
- Big Data & Databases:** MySQL, PostgreSQL, Hadoop, ETL pipelines, apache Airflow, Docker, Apache Spark