Murali K

Data Scientist

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Education

Indian Institute of Technology Bombay — **Aug 2020 – June 2022**
Master of Science in Physics, CPI: 8.45/10 — *Mumbai, Maharashtra*

University Visvesvaraya College of Engineering — **Aug 2015 – June 2019**
Bachelor of Engineering in Mechanical, Marks:79.9/100 — *Bangalore, Karnataka*

Professional Experience

Kotak Mahindra Bank — **July 2022 – Present**
Business Analyst-Digital Channels — *Mumbai, Maharashtra*

- Analyzed customer pain points related to login, KYC, and service modules. Pinpointed key issues and proposed solutions, resulting in a 25% reduction in tickets raised and a 20% decrease in drop-off rates for Net-Banking and m-site.
- Devised and executed a comprehensive customer analytics and segmentation model targeting the distinct needs of Retail, Corporate, and Privy Customers. Launched tailored solutions, driving a notable 12-15 point surge in NPS.
- Steered comprehensive data analysis on Fund Transfer Module transactions of Net-Banking, isolating issues and root causes. Decoded insights and failure patterns, and devised strategies to address the majority of potential problems. Architected a robust solution targeting IMPS timeout issues and initiated the Dispute Resolution Portal project.
- Conducted A/B Testing and gathered customer insights on the Deposit Module, Statement Module, and m-site to identify the most impactful features, resulting in a 60% reduction in TAT and a 30% increase in user adaptation.
- Designed and managed dashboards and periodic KPI reports, along with project documentation, for Digital Channels.
- Translated business requirements into technical specifications, by formulating over 25 comprehensive Requirement Documents (BRD and PRD) and User Stories for Net-Banking. Ensured optimal user experience, functionality, and data-driven decisions, while also managing Project Management tasks and devising go-live strategies.

Shapoorji Pallonji E&C — **July 2019 – September 2019**
Graduate Engineering Trainee — *Chennai, Tamil Nadu*

- Managed ERP and procurement processes for a multi-speciality trauma care hospital construction project with a budget of approximately INR 500 crore. Conducted detailed analysis of contract documents, and oversaw resource planning.

Projects

Car Price Predictor for Used Cars | *Scikit-learn, Streamlit, EDA* **Link**

- Developed Car Price Predictor for Used Cars to estimate resale value of cars and deployed it in Streamlit Cloud.
- Performed in depth data analysis including data cleaning, feature engineering and extracted key insights from the data.
- Achieved an MAE of 955$ and R^2=95% using GradientBoost and other ML Algorithms. The model can be utilized in financial firms for estimating resale value of car, particularly for mortgage and insurance valuations.

Credit Card Fraud Detection System | *Scikit-learn, Streamlit, Pandas* **Link**

- Built a model to detect fraudulent Credit Card transactions based on financial, temporl and geographical features.
- Realized EDA on a sizable dataset with a huge class imbalance, employed techniques to address the data imbalance and engaging in feature engineering. Deployed model in Streamlit-Cloud. The model can be integrated with FRM system.
- Achieved an F1 Score of 0.78 and AUC Score of 0.94 with focus on user experience without compromising on security.

Auto-Insurance Claim Fraud Prediction System | *Python, Flask, Render* **Link**

- Pioneered a model to automatically classify auto insurance claims as fraudulent or not, thus reducing manual effort.
- Implemented an automated pipeline to fetch data, perform pre-processing and feature engineering, evaluate models, predict outputs, and developed a Flask app for this system, achieving an F1 score of 0.95.

Multi-Label Bank Customer Complaint Classification | *Python, Hugging-Face, Gradio* **Link**

- Analyzed bank consumer complaint data and created a multi-label, multi-class classification system to predict the categories and subcategories of complaints, facilitating efficient routing of customer issues to the appropriate teams.
- Built a custom pipeline by fine-tuning a BERT model, achieving a Micro-F1 score of 77% and a Macro-F1 score of 71%.

Customer Lifetime Value(LTV) Prediction | *Python, Pandas, Plotly* **Link**

- Conducted EDA on the sales dataset, uncovering key insights into sales, customer behavior, and shopping patterns.
- Implemented an RFM , BG-NGD and GG model to predict customer Lifetime Value (LTV) for the given dataset. Classified customers into different segments based on LTV and predicted purchase for further Cohort Analysis.

Technical Skills

Languages: Python | **Machine Learning**: Time Series Analysis, Regression, Classification, Data Analysis | **Deep Learning**: Neural Networks, ANN, CNN | **NLP**: Text Classification, Summarization, Generation, Name Entity Recognition, Transformers | **Libraries**: scikit-learn, TensorFlow, Keras, PyTorch, Hugging Face | **Database**: PostgreSQL, MySQL, MongoDB | **REST-API**: FastAPI, Flask | **Version Control**: Git, GitHub | **Basic MLOPS**: GitHub Actions, Docker | **BI-Tools**: Excel, Power BI | **Big Data**: PySpark | **Additional Skills**: Statistics, Computational and Mathematical Physics, Numerical Methods, Product Management

Certifications

1. Data Science Masters 2.0 - PW Skills **2.** Complete Data Engineering 3.0 With Azure - Grow Data Skills*