Chirag A. Pallan

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❖ Summary

Results-oriented Machine Learning Engineer and Data Scientist with a proven track record of developing and deploying high-impact financial analytics solutions. Expertise in propensity modeling, deposit pricing optimization, and predictive modeling, including a personal interest in stock price forecasting leveraging deep learning (RNN/LSTM), behavioral segmentation, and advanced statistical techniques. I build scalable, data-driven models that drive significant business outcomes. Adept at automating data pipelines and risk profiling frameworks, I have delivered **measurable improvements in campaign efficiency (e.g., a 10% increase in net interest margins)** and operational effectiveness. Collaborate effectively with cross-functional teams (marketing, finance, governance) to translate data insights into innovative, revenue-generating strategies.

❖ Skills

Python | SQL | TensorFlow | predictive analytics | SAS | pyspark | Data Wrangling | Statistical Analysis and Modeling | Communication | Problem-Solving | Critical Thinking | Curiosity and Learning | ChatGPT (OpenAI)

❖ Experience

Standard Chartered – Modeling and Analytics (SCMAC)
Machine Learning Engineer | Data Scientist
Sep 2022 - Present *Bangalore, Karnataka*

1. Propensity Modeling & Strategy Development

- Led development of cross-sell, upsell, and retention propensity models for retail banking products (CASA, CC, etc...), improving targeting precision.
- Presented models performance insights (AUC, decile lift, PSI, GSI, feature importance, decile-wise rank ordering and business KPIs) to senior leadership, ensuring model adoption in multiple global markets.

2. Deposit Pricing Optimization

- Partnered with Product teams to design client-centric pricing models, balancing regulatory constraints and profitability.
- Developed propensity model based solution to optimize term deposit pricing, leading to increase in **~10% Net Interest Margin (NIM)** in various markets.
- Built a Python/Streamlit-based optimization engine integrating multiple model (**ensemble)** scores for precise client targeting based on the strategy.

4. Innovation & Thought Leadership

- Delivered internal presentations on **LSTM architectures**, advocating for the adoption of deep learning in financial modeling.
- Championed the reuse of models across products (e.g, adapting AUM drop models for eSaver campaigns), **Reducing redundant work by 80%**

5 . Stock Price Forecasting System (personal project RNN/LSTM)

- Developed an end-to-end deep learning pipeline for high-frequency 60-minute stock price prediction (**5-minute granularity**).
- Automated data ingestion pipeline using yFinance API, streamlined/automated model retraining with GitHub Actions, and built real-time dashboards with Streamlit. Achieved RMSE **less than 1%**, optimizing trading insights and investment strategies.

IIT Madras (IC&SR) – Startup
Data Scientist
Feb 2022 - Aug 2022 *Chennai, Tamil Nadu*

- Built ML powered road condition monitoring/anomaly detection algorithm integrated with GIS mapping. Low cost IoT devices are used in data collection to **reduce the total cost by ~30%**.
- Engineered ML models for driver behavior classification, enhancing risk profiling.
- Developed predictive maintenance models using vibration analytics, **reducing IoT resource utilization by 20%**.

The Schram Academy & Self-employed
Mathematics Faculty (IIT JEE)
Jun 2019 - Feb 2022 *Chennai, Tamil Nadu*

- Trained IIT JEE aspirants with customized curriculum for **50+ students annually**, increasing mock test **Performance by 20%**.
- **Leveraged analytics to monitor student performance**, identify learning gaps, and adapt lesson plans, resulting in improved student outcomes and engagement.
- Developed adaptive lesson plans for calculus/algebra/geometry etc.., reducing reliance on third-party resources.

❖ Education

IIIT Bangalore
Executive Post Graduate Programme in Data Science
Coursework: Machine Learning, Deep Learning, Time Series Analysis, Python & SQL for Data Science

IIT Madras
M.S. by Research | CGPA: 8.6
Thesis: Computer-Based Simulation Model for Fatigue Damage Assessment of Marine Risers
Research Focus: Computational modeling, predictive failure analysis.

The Aeronautical Society of India | first class
B.Tech in Aeronautical Engineering

Final Year Project: Analysis of supersonic flow over a double-diamond wedge to study shock formation at different angles of attack.