

RAMANATHAN MURUGAPPAN

Data Scientist | Fin & Pharma Tech

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5+ years of Experienced Data Scientist proficient in Gen-AI & ML Modeling, excelling in engineering innovative solutions that align with business goals and enhance operational efficiency.

PROFESSIONAL EXPERIENCE

Data Science Analyst

ACCENTURE | Global Consulting and Technology Company driving innovation in Data science, offering Advanced Analytics Solutions

Aug 2021 – Present
 Bangalore

- Flipkart Lens** - Engineered a sophisticated visual search tool to address poor user experience in visual product searches, leveraging SAM for effective background removal and Clip-ViT-B for robust image embeddings. Integrated a Qdrant vector database to enhance search functionality, resulting in a significant improvement in user experience.
- GENAI Asthma Prediction Tool** - Developed a GENAI asthma prediction tool for a global healthcare company, integrating RAG and LLM chat functionality with Excel/CSV. Led front-end & Back-end development using Streamlit and contributed to two project phases, coordinating efforts with the team and conducted client demos.
- Fee-Optimizing Model** - Engineered a Plasma Donation fee-optimizing model, applying Segmentation and Profiling to payments, transaction and customer data, with a focus on feature engineering. Collaborated with the strategy team to convert hypotheses into actionable insights and utilized automated web scraping for data collection, enhancing the strategy's effectiveness.

Data Science Analyst

KALEIDOFIN | Series B FinTech Startup serving the Underbanked Space, backed by BHARAT Inclusion, Omidyar Network & BLUME Ventures

Dec 2019 – Aug 2021
 Chennai

- Credit Risk Model** - Developed a Credit Risk model using Bagging and Boosting for risk assessment, analyzing transaction, demographic, and credit data from MFI partners. This model efficiently scores new-to-credit and MFI customers and includes monthly risk analyses for continuous improvements in code base performance.
- Payment Prediction Model** - Developed an end-to-end prediction model utilizing machine learning techniques such as RandomForest, LightGBM, and GridSearchCV for hyperparameter tuning. This model accurately predicts customer payments, leading to improved efficiency and optimization of Kaleidofin's in-house call center operations.
- Dashboards & Database Automation** - Designed and deployed customized dashboards for partners and teams, catering to unique business needs, alongside automating workflows with Apache Airflow. Also built data pipelines to integrate various data sources, thus enriching dashboards with in-depth, granular data.

ACHIEVEMENTS & OTHER PROJECTS

- GrowthX** - Targeted the challenge of increasing Blue Tokai's revenue from ₹250 crore to ₹500 crore within 12 months during the GrowthX program. Won the Capstone by presenting our strategy to 1,000+ industry professionals. Blue Tokai's founders expressed interest in implementing 80% of our recommendations.
- Resume Chatbot** - Built a web-based chatbot to simulate resume-related interview questions using Gemini(LLM). Deployed with Flask and React.js, ensuring consistency with Docker. Implemented on Render to enhance user interaction with resumes.
- Flight Delay Prediction** - Two stage predictive ML Engine that forecasts On-time performance of flights using Weather Data in the US. The first stage performs binary classification to predict flight delays, and the second stage uses regression to predict the delay duration in minutes.

SKILL-SETS

Database & ETL

MySQL

PostgreSQL

MongoDB

DynamoDB

BigQuery

Apache Airflow

AWS RDS

Qdrant

Languages and Framework

Python

LangChain

LLamaIndex

Transformers

React.js

Apache Spark

Pandas

Dask

Keras

Plotly

Selenium

ML Ops

Docker & Kubernetes

Podman & OpenShift

MLFlow

Git

AWS Lambda

AWS EC2

BashScripting

Tools

VS Code

JupyterLab

Databricks

Dataiku

Product Analysis with POW

Acquisition

Onboarding

engagement&retention

Monetization

PUBLICATIONS

SOLARILLION FOUNDATION (SF)

Research Assistant + Teaching Assistant

Aug 2018-May 2020
 Chennai

- A Two-Stage Machine Learning Approach to Forecast the Lifetime of Movies in a Multiplex** - Published at Future of Information and Communication Conference (FICC) 2020, San Francisco, USA.
- User-Independent Human Stress Detection** - Published at IEEE Intelligent Systems IS'20 - Varna, Bulgaria, August 2020.

EDUCATION

M.E Mechatronics

Anna University (M.I.T Campus)

2018-2020
 Chennai

CERTIFICATION

- Red Hat Certified Specialist in OpenShift Administration**
- Generative AI for Developers by Google**
- Advanced Analytics for Data Scientists by Workera**
- Responsible AI by Workera**