THARUN SRIRAM

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PROFESSIONAL EXPERIENCE

THE VANGUARD GROUP   Philadelphia, US
Senior AI and ML Scientist   Feb 2024 to Present

- Drove **8.5X conversion lift** versus business-as-usual marketing campaigns for Cash Plus and Margin loans by training a **LightGBM** propensity model on 9M+ client data.
- Saved **hundreds of man-hours** by building a Claude-based **agentic framework** for real-time data observability by summarizing and highlighting insights from automated data views.
- Propelled product strategy by leveraging clustering-based **text summarization** with **Llama3** and **sBERT** to extract targeted sentiments and topics from large volumes of survey comments.
- Saved **$10M+** in code refactoring costs by developing a **GPT-4o** based tool to automate lineage & metadata extraction from repositories; led prompt engineering & backend architecture with **AWS Lambda** & **SageMaker**.
- Averted **$1.8M+** in daily client portfolio risk exposure by developing an **XGBoost** driven real-time anomaly detection model to flag inaccurate fund information.
- Assisted retirement research by creating client personas from **weighted K-means clusters** based on public survey data.

Data Scientist Intern - Financial Advisory Services Lab   Jun 2023 to Aug 2023

- Boosted **capture rate** from 13% to **60%**, by redesigning a product **recommendation system** with matrix factorization and a supervised Recurrent Neural Network (**RNN**) setup.

ANHEUSER BUSCH INBEV   Bangalore, India
Associate Data Scientist - Revenue Management   Aug 2020 to Sep 2021

- Contributed to **15.6%** organic revenue growth & saved **6,000+ man-hours** by automating combinatorial feature engineering pipelines for **price elasticity models** in the top 20 markets worth over **$40B**.
- Supported a **9.6%** increase in annual sales by spearheading Covid-19 market analysis and leveraging key sales drivers with **time series** techniques like **Prophet** and **TBATS**.
- Implemented data driven promotions & advertisements strategy in 10,000+ retail outlets in Mexico by leveraging **K-means clustering** on millions of rows of real-time store traffic data to **quantify consumer behavior.**

EDUCATION

UNIVERSITY OF CALIFORNIA LOS ANGELES   Graduated
Master of Science in Business Analytics (Data Science) | GPA: 3.95/4.0, Top 15%
Courses: Statistics, Machine learning, Product Management, Large Language models, Data Management & SQL, Customer/Marketing analytics, Optimization, Competitive Analytics, Operations Analytics, Internet Analytics, Fraud Analytics, Business Fundamentals (Finance, Economics, Marketing).

NATIONAL INSTITUTE OF TECHNOLOGY TRICHY   Graduated
Bachelor of Technology in Engineering (Chemical) & **Computer Science** minor
Courses: Data Structures & Algorithms, Database Management Systems, Software Engineering, Engineering.

SKILLS

Languages:	**Python** (Pandas, Polars, NumPy, Matplotlib, Scikit-learn, Keras/TensorFlow, nltk, HuggingFace, LangChain, Spark/PySpark), **R** (dplyr, ggplot2, caret, Prophet), **SQL**, **C++, Bash**
Engineering:	AWS (SageMaker, Athena, S3, Lambda, Glue, etc.), MLOps, Git, Gurobi, Tableau, Jira, Streamlit
Data Science:	Machine Learning, Deep learning, NLP, LLMs, RAG, Predictive & Prescriptive Analytics, Optimization, Experimentation & A/B testing, Clustering/Segmentation, Forecasting/Time series, Recommendation systems, Data Mining, Strategy & Agile, Product Management
Certification:	HackerRank - SQL Advanced, Stanford - Machine Learning, deeplearning.ai - Neural Networks and Deep learning, Convolutional Neural Networks, Introduction to TensorFlow

PROJECTS

- **BECTON DICKINSON UCLA CAPSTONE** - Led the development of an AI search engine to rank clinical trials for researchers by leveraging a **BERT-based sentence transformer,** leading to efficient retrieval. (2023)
- **AMAZON X UCLA HACKATHON FINALISTS** [Link]- Designed and implemented a product recommender using **content-based** ranking and **DistilBERT**, leveraging product metadata from Amazon. Qualified to the top 4. (2022)

LEADERSHIP

- **INTERN COACH (VANGUARD):** Led and supervised 2 interns on AI/ML projects, owning goal setting, progress tracking, technical mentorship, and formal input into performance reviews and internship success metrics. (2025)
- **DATA SCIENCE MENTOR:** Directly mentored over 8 participants in the Women in Data Science (WiDS) 2025 datathon at Vanguard, helping foster a learning environment for women coming from non-technical fields. (2025)
- **MSBA ALUMNI CAREER COACH (MACC):** Mentoring over 120 master's students in data science careers, with direct responsibility for 6. Conducted technical interviewing workshops and coaching sessions. (2024-Present)