Ashwin Ram

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EDUCATION

M.S. in Applied Data Science, University of Chicago - ***GPA: 3.90/4.00*** ***Aug 2024 – Expected Dec 2025***

Coursework: Statistical Models, Causal Inference, Bayesian Machine Learning, ML-Ops, Generative AI, Data Engineering & Big Data

B.Tech in Computer Science Engineering, SRMIST - ***GPA: 3.91/4.00*** ***Aug 2020 – May 2024***

Coursework: Data Structures & Algorithms, Linear Algebra, Data Analytics, Computer Vision, Data Mining, and Business Statistics

SKILLS

Programming & Databases	Python (NumPy, pandas, Scikit-Learn, TensorFlow, PyTorch, MLflow), R, SQL, Spark
Cloud & Big Data	Google Cloud Platform, Amazon Web Services, Docker, Hadoop, Hive, Kafka
Data Visualization & Analytics	Tableau, Power BI, Looker, DAX, Matplotlib, Seaborn, Plotly, Microsoft Excel
Optimization & Decision Science	A/B Testing, KPI & Sensitivity Analysis, Linear Optimization, Monte Carlo Simulation
Soft Skills	Attention to Detail, Adaptability, Time Management, Analytical Thinking, Collaboration

WORK EXPERIENCE

Evoke Technologies - Dayton, Ohio ***June 2025 – Present***

Data Science Intern (Capital Markets) – AI & Financial Research

- Develop scalable ETL pipelines to ingest and orchestrate **OHLCV data, EPS, and revenue forecasts** for 9,000+ global stocks and ETFs, incorporating a **financial domain ontology** to standardize & unify diverse data types across equities and derivatives
- **Apply NLP techniques** to extract and quantify sentiment signals from premium financial publications, integrating sentiment scores with structured alternative datasets **to enhance alpha generation and signal modeling**
- Develop **predictive models** to analyze option flow and **detect directional trading signals**, contributing to **portfolio optimization**, risk-adjusted returns, and data-driven strategy design

Argonne National Laboratory – Chicago, IL **April 2025 - Present**

Capstone Researcher – Connected & Automated Vehicles ***(Part Time Capstone)***

- Working with Argonne's Connected and Automated Vehicles (CAV) group on developing a **monocular vision-based system** to estimate lead vehicle distance, **targeting a sub-10% error tolerance** under varied real-world driving scenarios
- Aligning technical outcomes with project priorities focused on **road safety, energy efficiency, and PII compliance** to support future deployment in **sensor-constrained environments**

Prodapt Solutions - Chennai, India ***Mar 2024 – July 2024***

Data Science Intern – Delivery

- Built **a real-time network anomaly detection pipeline** processing 36K+ events/hour, combining Isolation Forest, DBSCAN, and Autoencoders **to achieve 92% precision and 89% recall**, significantly improving threat detection accuracy
- Design model monitoring pipelines with statistical performance tracking, **KL-divergence for input drift**, and confidence-based alerts to **detect concept drift and initiate automated retraining**.
- Developed a dashboard to visualize anomalies and trigger real-time alerts, **streamlining triage and improving response time**

Aspire Systems – Chennai, India

Data Scientist Intern – Delivery ***June 2022 – Sept 2022***

- Trained a **YOLOv5-based deep learning model** for shelf void detection using a manually curated and augmented image dataset, achieving **high-precision identification** of understocked zones in real-time retail environments
- Deployed a real-time monitoring system that alerts managers to low stock, **improving on-shelf availability by 15%**
- Implemented a data-driven product recommendation system using market basket analysis on 1M+ retail transactions, optimizing restocking strategies and boosting **cross-category revenue by over 20%**

PROJECTS

Agentic YouTube AI – Generative Multi-Agent System for Content & Engagement Optimization

Built a multi-agent GenAI pipeline that generates titles, thumbnails, and scripts based on top YouTube content. Simulated user engagement and evaluated performance using Bayesian A/B testing and uplift modelling to optimize content strategy.

Clinical Trial Risk Intelligence System – Predictive Modeling & Survival Analysis for Patient Retention

Developed a patient attrition prediction model using XGBoost and Cox Proportional Hazards with EHR and adherence data. Applied SHAP for explainability and survival curves to inform retention strategies and reduce trial delays

Healthcare Outreach ROI Model – Marketing Mix Modeling for Channel Effectiveness

Built a regression-based model using real-world hospital outreach spend to quantify ROI across email, referrals, and call centers. Modeled adstock effects and guided budget reallocation strategies to improve new patient acquisition.

CERTIFICATIONS

Google Advanced Data Analytics IBM AI Engineering NVIDIA Deep Learning Microsoft Azure Data Fundamentals

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Event-Driven Demand Shock Forecaster – External Signal-Based SKU Demand Prediction

Combined time series models and XGBoost to forecast demand spikes triggered by flu outbreaks and weather events. Built a shock sensitivity index and early-warning system to support supply chain decisions.

Conversational Impact Analyzer – Causal Inference & NLP on Support Conversations

Built a causal inference system using Transformer-based NLP to measure how message tone influences resolution outcomes. Applied uplift modeling to identify language strategies that improved satisfaction and reduced response time.

Customer Segmentation & Retention Insights Platform – Behavioral Analytics Platform for Marketing Optimization

Segmented users using RFM and unsupervised learning (K-Means, PCA) on behavioral and transactional data. Modeled churn with survival analysis and classification to uncover actionable retention strategies and customer lifetime insights

Google Advanced Data Analytics IBM AI Engineering NVIDIA Deep Learning Microsoft Azure Data Fundamentals