Ashwin Ram

Chicago, IL 60615 | ashwinram@uchicago.edu | (773) 886-3498 | LinkedIn | Github |

EDUCATION

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

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

B.E. 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, TensorFlow, PyTorch, Scikit-Learn, MLflow), R, SQL, Spark
Big Data Technologies	Google Cloud Platform, AWS, Docker, Spark, Hadoop, Hive, Kafka Pub/Sub
Data Visualization & Analytics	Tableau, Power BI, Looker, DAX, Matplotlib, Seaborn, Plotly, Microsoft Excel
Optimization & Decision Science	Mixed-Integer Linear Programming, Sensitivity Analysis, A/B Testing, KPI Analysis
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

- Built a scalable multi-source data pipeline aggregating equity fundamentals, technical indicators, and NLP-derived sentiment from 500K+ financial articles and earnings transcripts.
- Fine-tuned BERT to extract sentiment, events, and entities, enabling structured alpha signals from unstructured financial text.
- Developed return forecasting models (XGBoost, GRU) improving directional accuracy by 12% over baseline; engineered features to enhance signal strength and model generalization.
- Applied Bayesian optimization for portfolio construction, dynamically calibrating asset weights to maximize Sharpe ratio under real-world risk and turnover constraints.

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.
- Implemented model monitoring and drift detection using statistical performance baselines, KL-divergence for feature distribution drift, and model confidence thresholds; enabled early detection of concept drift and automated retraining pipelines.
- Developed a dashboard to visualize anomalies and trigger automated alerts, enabling faster triage and improved response time.

Aspire Systems – Chennai, India

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

- Trained a YOLOv5 model for shelf void detection using manually annotated images and data augmentation, enabling accurate identification of empty spaces.
- Deployed a real-time monitoring system that alerts managers to low stock, improving on-shelf availability by 15%.
- Developed a product recommendation module using market basket analysis on 1M+ transactions to guide restocking decisions, increasing cross-sell revenue by 20%.

PROJECTS

Monocular Vision System for Driver Assistance - Depth, Lane, and Steering Estimation from Camera Input

Worked with Argonne National Laboratory, Chicago

Developed a monocular vision system using front-facing camera data from CARLA and real-world driving to estimate lead vehicle distance, lane geometry, and steering angle. Integrated perception tasks into a unified real-time pipeline with PII filters.

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

Built a multi-agent generative AI pipeline trained on top YouTube content across 10 industries. Agents specialized in thumbnail analysis, script generation, and title creation, with system performance evaluated via Bayesian A/B testing.

Credit Risk Scoring System – Predictive Modelling for Credit Risk Assessment

Developed a credit risk model using logistic regression and XGBoost, with feature engineering, hyperparameter tuning, and interpretability through SHAP and PDP. Built a dashboard to visualize risk segments and inform lending strategy.

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.

Readmission Risk Predictor for Healthcare Systems – Machine Learning Model for Patient Risk Stratification

Analyzed 100K+ patient records to identify drivers of 30-day readmissions using statistical testing and classification models. Applied SHAP for interpretability and built a dashboard to visualize risk patterns and support hospital resource planning.