

PRANAV PARTHASARATHY

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EDUCATION

The George Washington University, School of Engineering & Applied Science

December 2025

Master of Science in Data Analytics

Washington, DC, USA

Recipient of SEAS Merit Award.

Relevant Coursework: Big Data Analytics, Advanced Database Management, Data Analysis, Data Visualization, Statistical Analysis and Modeling, Machine learning, Data Compression.

Sri Venkateswara College of Engineering, Anna University

May 2023

Bachelor of Engineering in Computer Science and Engineering

Chennai, TN, India

Relevant Coursework: Data Structures & Algorithms, Probability and Statistics, Natural Language Processing, Machine Learning Algorithms, Data Mining, Database Management, Computer Networks, Artificial Intelligence, Business Intelligence.

SKILLS

- **Programming Languages:** C/C++, Python, R, HTML/CSS, JavaScript
- **Database:** RDBMS (MySQL), MongoDB, SQL, ArangoDB, VectorDB, Data Warehousing, Data Lake, Databricks, Snowflake
- **Tools & Frameworks:** AWS, Azure, Flowise, Git, Flask, API Development (REST/Node.js), Data Analytics (EDA, ETL, Power BI, Pandas, NumPy), Bootstrap, React.js, Linux, Agile, Pinecone, LLM
- **Certifications:** Career Essentials in Data Analysis – Microsoft & LinkedIn, Power BI Essential Training, Data Analyst: Professional Certificate in Data Analysis, AWS Academy Cloud Foundations course.

PROFESSIONAL EXPERIENCE

GenAI Consulting Intern - BCG (Forage Job Simulation), Remote

Sep 2025 – Oct 2025

- Completed a GenAI consulting simulation focused on building an AI-powered financial insights chatbot.
- Developed Python workflows using pandas to extract and manipulate financial data from 10-K and 10-Q reports.
- Designed and implemented rule-based logic to interpret complex financial statements, enabling the chatbot to deliver clear, user-friendly financial analysis.
- Strengthened expertise in GenAI applications for business intelligence and consulting use cases.

Data Analytics Intern - Tata Group Job Simulation on Forage, Remote

Jun 2025- Jul 2025

- Proposed a no-code predictive modeling framework achieving 70% classification accuracy for delinquency risk, enhancing explainability and transparency.
- Designed an AI-driven collections strategy projected to reduce delinquency by 10–15%, integrating ethical governance and agentic AI automation.
- Ensured data integrity and compliance by embedding GenAI-structured logic for fair and scalable implementation.

Data Analytics Intern - Quantum, Remote

Feb 2025 - Mar 2025

- Analyzed 1000+ simulated transaction records to deliver targeted customer segmentation, identifying 3 key segments for tailored marketing strategies.
- Identified top 5 benchmark stores and executed uplift testing, simulating a layout change impact with a projected 5–8% improvement in category sales.
- Compiled 3 strategic actionable recommendation based on data insights to assist in optimizing store layout.

TECHNICAL PROJECTS

LLM-Powered Aviation Anomaly Detection

Sep 2024 – Dec 2024

- Built XGBOOST and negative sampling neural network anomaly detectors on aircraft telemetry data, achieving AUC 0.60 and 0.54. Applied SHAP and LIME to uncover key feature attributes shaping anomaly predictions.
- Developed a GPT-4 powered RAG chatbot fine-tuned on aviation manuals for real-time root cause analysis and corrective actions. Engineered a full-stack diagnostic pipeline using python, tensorflow, keras and streamlit.

Eidetik: A Contextual Memory Assistant (Intelligent Document Management)

Jan 2025- May 2025

- Developed a contextual memory assistant that transforms static documents into a searchable, conversational knowledge base for intelligent document management.
- Improved data accuracy and trust with verification workflows and strong privacy measures, enabling secure handling of sensitive documents.
- Delivered a scalable, extensible system capable of supporting multilingual documents, PDF ingestion, and enhanced user experience for real-world adoption.

Vector-Based Product Recommendation Engine with RAG

Oct 2024 - Dec 2024

- Architected and implemented a high-throughput ETL pipeline, processing 373 GB of Amazon review and product metadata from JSONL to PostgreSQL RDS for scalable analytics.
- Developed and optimized deep learning pipelines using OpenAI embeddings and Pinecone for high-dimensional similarity search across 1M+ product vectors.
- Designed and benchmarked advanced chunking algorithms, achieving a 30% increase in vector retrieval speed for large-scale user queries.
- Deployed a Flowise chatbot using retrieval-augmented generation (RAG) and real-time feedback for dynamic, personalized product recommendations.