Pranav Padmannavar

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EDUCATION

University of Minnesota Twin Cities *Sep 2024 – May 2026*
Master of Science in Analytics ***3.7 / 4.0***
Relevant Coursework: Machine Learning, Natural Language Processing (NLP), Data Mining, Predictive Analytics, Applied Regression Analysis, Database Systems, Data Visualization.

WORK EXPERIENCE

Daikin Applied Americas | University of Minnesota **Minneapolis, U.S.**
Data Science and Optimization Intern *Aug 2025 – Present*
- Identified $1.5M+ in projected annual manufacturing cost savings (a 4–5% reduction per unit) by automating the analysis of 2,000+ design parameters and recommending optimal material configurations to the core engineering team.
- Engineered a predictive optimization framework (LightGBM, Scikit-learn) for the flagship "Rebel Applied" rooftop HVAC line, accelerating simulation runtime by 90% (reducing compute time from hours to minutes).
- Saved an estimated 1,000+ engineering hours annually (approx. $150k in productivity) by enabling rapid validation of complex thermal scenarios, significantly shortening the R&D feedback loop.

Data Science and AI Hub | University of Minnesota **Minneapolis, U.S.**
Instructor / Teaching Assistant *Jun 2025 – Aug 2025*
- Directed a cohort of 85+ students and mentored 20+ teams through end-to-end AI capstone projects, achieving a 100% completion rate by providing expert consultation on Python, model evaluation, and Responsible AI principles.

University of Minnesota **Minneapolis, U.S.**
Graduate Teaching Assistant | IE 3521-Statistics, Quality, and Reliability *Jan 2025 – May 2025*
- Advanced the comprehension and practical application of statistics for 76 students by co-designing course assessments and providing direct mentorship in hypothesis testing, regression analysis, and statistical programming in R.

Tata Consultancy Services **Bangalore, India**
Data Analyst | Pandora *Feb 2022 – Jul 2024*
- Spearheaded the automation of 30+ mission-critical weekly reports for Pandora's global retail operations ($4.5B+ revenue p.a.), eliminating 1,000+ manual hrs annually and accelerating strategic decision-making across 100+ markets.
- Engineered scalable ETL pipelines supporting the client's "Programme NOW" digital transformation, reducing data processing workloads by 35% and contributing to significant operational cost reductions in the IT landscape.
- Optimized high-volume SQL queries on multi-terabyte datasets, slashing dashboard response times by 40% to enhance analytics agility for 50+ business stakeholders driving global commercial strategy.
- Fortified data integrity across disparate retail systems by implementing automated validation scripts, improving data accuracy by 15% and mitigating an estimated $50k+ in annual revenue leakage due to inventory discrepancies.

SKILLS

Programming Languages: Python, Advanced SQL, R, Scala, Git
Statistics & Modeling: A/B Testing, Causal Inference, Hypothesis Testing, Statistical Modeling, Predictive Analytics
Libraries & Frameworks: Pandas, NumPy, Scikit-learn, PyTorch, TensorFlow, Hugging Face, XGBoost, LightGBM
Big Data & MLOps: PySpark, Databricks, Airflow, Kafka, MLflow, Docker, Kubernetes, CI/CD, REST APIs
Databases & Cloud: Microsoft Azure, AWS (S3, EC2, SageMaker), GCP (BigQuery, Vertex AI), PostgreSQL, MySQL
Data Visualization: Tableau, Power BI, Matplotlib, Seaborn, Data Storytelling

ACADEMIC PROJECT EXPERIENCE

End-to-End Recommender System *Jun 2025 – Aug 2025*
- Engineered a scalable PySpark data pipeline and trained a Scikit-learn collaborative filtering model, forming the core of a system that increased user engagement by 25%.
- Deployed the model as a containerized (Docker) REST API on Azure, serving the real-time predictions that drove the 25% increase in user engagement.

Demand Forecasting & Inventory Optimization *Aug 2024 – Dec 2024*
- Developed a time-series forecasting model to optimize inventory, creating a solution projected to reduce inventory costs by 15%.
- Applied the model to forecast product demand, designing a system that improves order fulfillment rates by 28% through supply chain optimization.

Stock Market Real-Time Data Analysis using Kafka *Feb 2024 – Apr 2024*
- Orchestrated a distributed, real-time streaming pipeline using Kafka and PySpark on Microsoft Azure to ingest, clean, and process live market data.
- Implemented and deployed a Python-based statistical model to analyze the live data feed, achieving 90% prediction accuracy in real-time.