Manjunath Popuri

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SUMMARY

Data Scientist with 3+ years of combined research, industry, and academic experience applying statistical methods, machine learning, and cloud-native AI solutions to deliver measurable business outcomes. Skilled in A/B testing, Bayesian inference, predictive modeling, NLP (BERT, Transformers), and data visualization. Proven ability to translate business problems into data-driven experiments, build scalable ML pipelines on Azure & AWS, and communicate insights through executive storytelling and dashboards.

EDUCATION

University at Binghamton, State University of New York, *Binghamton, NY, USA*   **AUG 2023 - MAY 2025**
Masters in Computer Science (Specialization: AI)

Vasireddy Venkatadri Institute of Technology, *Guntur, Andhra Pradesh, India*   **AUG 2019 - JUN 2023**
Bachelors in Computer Science and Engineering

TECHNICAL SKILLS

Languages: Python, R, Java, SQL, C/C++, JavaScript
ML & AI: TensorFlow, PyTorch, Scikit-learn, OpenCV, Apache Spark MLib, A/B testing, Hugging Face, Transformers, Generative AI, LLM Fine-tuning, NLP (BERT, TF-IDF, Word2Vec)
Data Tools: Pandas, NumPy, Tableau, Power BI, Matplotlib, Seaborn, SpaCy, PySpark
Cloud & MLOps: AWS, Azure, Docker, CI/CD Pipelines, Git
Databases: MySQL, PostgreSQL, MongoDB, MS SQL

WORK EXPERIENCE

Binghamton University, *Remote, Binghamton, NY, USA*   **Research Intern**   **JUL 2025 - PRESENT**
- Developed a **quantized LLM (Mistral-7B, Phi-3)** for predictive expense classification (90%+ accuracy), optimized for low-resource devices.
- Built **ML pipelines in Python, PyTorch, Hugging Face** with feature engineering, time-series modeling, and data wrangling of financial transactions.
- Designed and deployed **prescriptive ML models on AWS SageMaker**, providing personalized budget recommendations.
- Delivered **interactive dashboards (Matplotlib, Seaborn, Power BI)** with business storytelling, enabling non-technical stakeholders to make data-driven decisions.

Binghamton University, *Hybrid, Binghamton, NY, USA*   **Graduate Research & Teaching Assistant**   **AUG 2023 - MAY 2025**
- Applied **A/B testing, Bayesian inference, and quasi-experimental methods** to validate NLP models analyzing Russell 3000 earnings calls, boosting predictive accuracy by 18%.
- Designed ML pipelines with **BERT, Transformers, Scikit-learn**, and deployed at scale using **Azure ML**.
- Conducted **hypothesis testing and regression analysis** on financial data to ensure statistical rigor in insights shared with faculty/industry.
- Created **executive-level dashboards (Power BI, Tableau)** with UX design principles and mentored 150+ students in ML and statistical experimentation.

Cognizant Technology Solutions, *Onsite, Hyderabad, India*   **Data Scientist**   **JUL 2022 - JUN 2023**
- Delivered **predictive modeling and classification solutions** for healthcare/finance clients, improving accuracy by 30% with Scikit-learn, TensorFlow, and PyTorch.
- Applied **A/B testing, causal inference, and Bayesian optimization** to fine-tune ML models, reducing false positives by 22%.
- Built scalable **ETL pipelines with PySpark and SQL** for big-data processing on millions of records.
- Deployed production-ready models via **Azure ML & AWS SageMaker** with **Docker and CI/CD pipelines (GitHub Actions)** and presented insights through Tableau dashboards.

PROJECTS

Advanced Movie Recommendation System (Unsupervised Learning): Built a content-based recommendation engine using TF-IDF, Word2Vec, PCA, and K-Means, boosting semantic accuracy by 20% and scaling similarity computations with parallel processing.
Tech Stack: Python, Scikit-learn, NLTK, TF-IDF, Word2Vec, PCA, K-Means clustering

Real-Time Digit Recognition App (Deep Learning): Developed Android app for real-time handwritten digit recognition using MobileNetV3 and ResNet-50, achieving <100ms latency and deployed via Firebase ML Kit, enabling fast, GPU-accelerated predictions.
Tech Stack: Python, TensorFlow, Keras, TensorFlow Lite, Android Studio, Java, Firebase ML Kit, OpenCV, NumPy

CERTIFICATION

- **Generative AI for LLM's, AWS Cloud Foundations & Architecting**