

VENKATA SIVA RAJESH VITHANALA

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EDUCATION

Master of Science in Data Science

University of Maryland, College Park

Expected May 2026

GPA: 3.95/4.0

Quantitative Coursework: Machine Learning, Computer Science, Statistics, Data Engineering, Operations Research, Applied Mathematics, NLP, Deep Learning

TECHNICAL SKILLS

ML & Data Science: Machine Learning, Statistical Data Analysis, A/B Testing, Hypothesis Testing, Causal Inference, Statistical Modeling, Time Series, Experimentation, High-Dimensional Data Analysis, Predictive Modeling | **Programming:** Python, R, Scala, SQL, Spark, Production-Level Code

LLMs & NLP: Large Language Models (GPT, LLaMA, Mistral), LLM Evaluation, NLP, BERT, Transformers, RLHF, RAG, Prompt Engineering, Fine-Tuning, Model Training/Evaluation, Production-Ready Models | **Data Engineering:** ETL Processes, Data Pipelines, Scalable Data Transformation, Apache Spark, PySpark, Azure Databricks Pipelines, Apache Airflow, Kubernetes

Big Data & Cloud: HDFS, S3, Iceberg, Trino, Distributed Compute/Storage, AWS, Azure, GCP, Spark Streaming | **Visualization & BI:** Tableau, Data Visualization, Metrics Development, KPI Design | **Tools:** Git, Docker, CI/CD, Jupyter, MCP, Software Engineering Best Practices

PROFESSIONAL EXPERIENCE

Machine Learning Engineer / Data Engineer

PalTech Company Pvt Ltd, India

Apr 2023 – Apr 2024

- Developed evaluation methods for ML products; worked with large, complex datasets solving analysis problems using advanced analytical methods; conducted statistical data analysis, A/B testing, hypothesis testing, experimentation; built prototyped analysis pipelines providing insights at scale using ETL (Python, Spark)
- Designed Azure Databricks pipelines processing 1M+ records with scalable ETL; partnered with engineering teams on ML algorithms; researched LLM evaluation methodologies leveraging large language models for product improvement; implemented NLP solutions (BERT, transformers) improving accuracy 20%; wrote production-level code with best practices
- Translated business questions using statistical techniques; analyzed high-dimensional data deriving insights; produced metrics, models, simulations; advocated for data structure changes; demonstrated business acumen, problem-solving, adaptability; built stakeholder relationships

Data Science / ML Intern

Connyc, United States

Jun 2025 – Aug 2025

- Applied statistical analysis solving business problems; built ML models, ETL pipelines; conducted A/B testing; worked with SQL, Spark, Python; articulated business questions; provided insights influencing decisions

Teaching Assistant – ML & Data Engineering

Break Through Tech AI, Cornell Tech, United States

May 2025 – Present

- Mentored on ML algorithms, data engineering, ETL, statistical analysis; shared best practices; demonstrated interpersonal skills; drove cross-functional collaboration

MACHINE LEARNING & DATA ENGINEERING PROJECTS

Real-time Bitcoin Analysis with PySpark | Data Engineering, Spark, Production Pipeline

- Built production-ready real-time pipeline using PySpark, Spark Streaming processing cryptocurrency data; designed scalable ETL for ingestion, transformation at 30-second intervals; implemented distributed compute (Spark, HDFS/S3); wrote production code with Kubernetes, Airflow; transformed raw data into actionable insights at scale; deployed on AWS with automation

Dialogue System Enhancement using RLHF | LLMs, NLP, ML Evaluation, Production Models

- Researched evaluation methods for dialogue systems leveraging LLMs; fine-tuned production-ready models using RLHF with PyTorch, Hugging Face; designed experiments analyzing performance with statistical methods; implemented metrics (BLEU, ROUGE, perplexity); improved quality 35%; demonstrated LLM evaluation, product improvement expertise

RAG-based Event Dialogue System | NLP, LLMs, Production-Ready, Data Engineering

- Built production-ready RAG system combining NLP and data engineering; architected scalable ETL pipeline; leveraged LLMs for semantic search, dialogue generation; implemented vector databases, embeddings with S3; designed evaluation framework; wrote production code with CI/CD, Docker; conducted A/B testing; achieved 100% context precision

WORK AUTHORIZATION: Eligible for full-time work authorization in the United States (F-1 OPT/STEM OPT)