Venkata Goutham Pachava

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EDUCATION

- **University of North Texas** — Denton, USA
  Master of Science – Advanced Data Analytics — *August 2023 - May 2025*
  Courses: *Predictive Analytics, Data Visualization, Artificial Intelligence, Machine Learning, Cloud Computing, Statistical Modeling*

SKILLS SUMMARY

- **Languages:** Python, R, SQL, C++, Go, Bash, JavaScript, Java
- **Frameworks:** TensorFlow, PyTorch, Scikit-learn, Keras, NLTK, SpaCy, LangChain, Flask, Django, Node.js, Streamlit
- **AI/ML:** Machine Learning, Deep Learning, NLP, LLMs, Predictive Models, PCA, A/B Testing, CNN, RNN, LSTM
- **Data & Cloud:** AWS (S3, Redshift, SageMaker), GCP (BigQuery, Vertex AI), Databricks, Snowflake, Kafka, Hadoop, Spark, Hive, MLflow, Data Lake, Data Warehouse
- **Databases:** PostgreSQL, MySQL, MongoDB, SQLite, Teradata, Oracle, Vector DB, PL/SQL
- **Tools:** Docker, Kubernetes, Airflow, Git, GitLab, CI/CD, JIRA, Tableau, Power BI, ETL Pipelines, CUDA
- **Soft Skills:** Leadership, Problem Solving, Communication, Team Collaboration, Time Management

EXPERIENCE

- **University of North Texas** — Denton, TX
  Research Assistant (AI-Driven Marketing Analytics) — *Mar 2024 – May 2025*
  - **AI-Powered Course Ads**: Automated personalized course ads across 4 platforms, optimizing content and timing.
  - **Power BI Dashboards**: Built dashboards with DAX to analyze marketing ROI, increasing ROAS by 25%.
  - **Data Automation**: Streamlined clickstream reports with Excel & Power Query, cutting processing time 48%.

- **Tata Consultancy Services** — Hyderabad, India
  Data Analyst — *Feb 2022 – Sep 2023*
  - : **BigQuery Optimization:** Designed and optimized SQL pipelines for 1.3x faster data retrieval.
  - : **A/B Testing:** Conducted 50+ experiments, reducing bounce rate by 46% and increasing engagement by 12%.
  - : **Churn Prediction:** Developed Random Forest model, improving retention by 25% ($2.6M annual impact).
  - : **ETL Automation:** Automated workflows using Alteryx & spaCy, saving 92% of manual effort.
  - : **Dashboard Reporting:** Created Power BI reports, optimizing stock-to-sales by 35% and resources by 45%.

- **Tata Consultancy Services** — Hyderabad, India
  Junior Data Analyst — *Jan 2021 – Feb 2022*
  - : **Excel Automation:** Automated reports using Python & SQL, reducing reporting time by 30%.
  - : **Dashboarding:** Built Power BI dashboards to track supply chain KPIs and bottlenecks.
  - : **Exploratory Data Analysis:** Performed EDA and visualization to support business insights.

PROJECTS

- **Optimizing Investments on Agricultural Land (Data Analysis, Predictive Modeling, Tableau)**: Conducted EDA on USDA datasets to analyze crop yields, soil characteristics, and land value, regression models to identify profitability factors, designed interactive Tableau dashboards for county-level trends and investment recommendations. (April 2025 –cGitHub)

- **Peterbilt Cost Optimization Analytics (Machine Learning, Tableau, Hackathon)**: Secured top 5 in UNT Hackathon; developed efficient ensemble ML models (Random Forest, XGBoost, Gradient Boosting) achieving 88% accuracy; built Tableau dashboards to highlight cost trade-offs between high- vs low-cost configurations. (December 2024 GitHub)

- **Research Copilot – AI Research Assistant (Generative AI, GPT-4, LangChain, FAISS)**: Developed a GPT-4-driven research assistant using LangChain and FAISS for context-aware summarization and Q&A; reduced research paper review time by 70%, enabling professors and students to extract key insights in under 5 minutes. (October 2024 -GitHub)

- **RNN & LSTM Time-Series Forecasting (Recurrent Neural Networks, LSTM, Time-Series, Python)**: Built and optimized RNN and LSTM models for synthetic and real-world sales forecasting; demonstrating sequential pattern learning, trend capture, and model optimization. (April 2024 - GitHub))

- **Advanced Google Capstone Project (End-to-End ML, Data Analytics, Cloud, Python)**: Completed end-to-end capstone data collection, cleaning, EDA, feature engineering, model building , tuning, evaluation, deployment, and reporting. Tech: Python, Pandas, Scikit-learn, TensorFlow, and GCP (deliver actionable, ML solutions). (August 2025 – GitHub)

CERTIFICATIONS

- **Google Advanced Data Analytics Professional Certificate (Google)**: Data Analysis & Visualization, Statistics, ML, EDA, Python, Tableau, Capstone Projects

- **Data Science Math Skills (Duke University)**: linear algebra, probability, statistics, and optimization for data science

- **ETL and ELT in Python(DataCamp)**: Python ETL/ELT Pipelines – Data Transformation & Automation