

SHRUTHI REDDY VUDEM

Saint Louis, MO, 63108 , vudemshruthireddy@gmail.com , 682-560-2789 , [LinkedIn](#) , [Research](#) , [Portfolio](#)

TECHNICAL SKILLS

- **Programming & Analytics:** Python, R, SQL, Java, TypeScript, Shell Scripting
- **Machine Learning & AI:** TensorFlow, PyTorch , Scikit-Learn, XGBoost, NLP, LLMs, Generative AI, Deep Learning, Computer Vision, Transformer Models, Explainable AI
- **Big Data & Cloud Computing:** AWS (S3, Glue, Lambda, Redshift), GCP (Big Query , Vertex AI), Databricks, Kubernetes, Azure, Spark, Hadoop
- **Data Engineering & Pipelines:** Apache Airflow, Snowflake, ETL, Data Warehousing
- **Visualization & Business Intelligence:** Tableau, Power BI, Looker, Matplotlib, Seaborn
- **Statistical Methods:** A/B Testing, Time Series Forecasting, Hypothesis Testing, Feature Selection, ROC/AUC, Model Validation

EDUCATION

Master of Science in Health Data Science

(Expected Dec 2025)

Saint Louis University, Saint Louis, USA

Bachelor of Dental Surgery

(Dec 2023)

Panineeya Institute of Dental Sciences, INDIA

EMPLOYMENT HISTORY

Research Assistant - Data Analyst

(Sep 2024-Present)

Saint Louis University , USA

- Designed and implemented deep learning models and reliability trend projections (CNN, Transformer) improving model accuracy by 15%. Led end-to-end ML pipeline development from data preprocessing to model evaluation for clinical risk forecasting.
- Orchestrated scalable ETL pipelines supporting site operations and forecasting, reducing data cleaning, transformation, and quality checks time by 30%.
- Integrated utility usage data and trend analysis into models to support forecasting and financial strategy driven healthcare solutions.

AI Data Analyst Intern

(May 2025 – Present)

Excelerate , USA

- Analyzing consumer behavior patterns using machine learning techniques (clustering, regression, and classification) to support data-driven product decisions.
- Applying NLP and AI methods to extract actionable insights from unstructured feedback and usage data.
- Collaborating on AI-powered dashboards for real-time trend detection and audience profiling using Python, SQL, and Power BI. Built interactive data products using generative AI and deployed prototypes via cloud-based APIs.

Data Visualization Intern

(Jun 2024 – Jul 2024)

Excelerate , USA

- Optimised and created **interactive dashboards (Tableau, Power BI, Looker)** to visualize key business metrics, improving decision-making speed by 20%.
- Built robust ETL pipelines supporting site operations and forecasting using Python (Pandas, NumPy), SQL, and AWS Glue, streamlining data extraction and transformation.
- Developed predictive analytics and utility forecasting models to track performance trends and optimize business strategy.

Clinical Data Associate

(Dec 2021 – Dec 2023)

Waterley Pharmaceuticals, INDIA

- Applied AI-driven predictive models for equipment failure and utility volume projections (Random Forest, Logistic Regression) for clinical trial analysis, improving accuracy to 85%.

- Modeled operational data to support billing accuracy and manpower utilization forecasting, reducing execution time by 40%.
- Created data visualization for KPI and compliance reporting reports for biostatistics and decision-making, facilitating key business insights.

OTHERS

Research Author

Panineeya Institute of Dental Sciences, INDIA

(Jan 2022 – Aug 2022)

- Co-authored a peer-reviewed clinical research paper published in the *International Journal of Early Childhood Education*.
- Supported the application of statistical modeling, data wrangling, and outcome analysis using SPSS and R to drive data-driven insights in clinical research.

PROJECTS

• **Data Science Dashboard for Tech Career Trends Analysis**

Developed an interactive Power BI dashboard to analyze tech career trends across demographics and skill sets, delivering actionable insights to stakeholders.

• **High-Performance Machine Learning on Drug-Related Deaths**

Built predictive models using parallelized Python pipelines for overdose death analysis (2012–2023), achieving 91% accuracy with interpretability features.

• **Statistical Analysis of Technology's Impact on Academic Life & Wellbeing**

Applied regression analysis to 8000+ GSS records, studying correlations between screen time, mental health, and academic performance.

• **Parkinson's Disease Clinical Dashboard – Predictive Analytics**

Developed a clinical dashboard to analyze the gap between perceived and actual balance ability in Parkinson's patients, using machine learning for clinical insights.

• **Predictive Analytics for Ride Cancellations in SAR Rental**

Engineered a classification pipeline with Logistic Regression, LASSO, and Random Forest to predict ride cancellations, optimizing features for better accuracy.

• **Urban Transportation Behavior Analysis (Walking & Biking to Work Trends)**

Analyzed ACS public data to uncover trends in transportation behavior, applying regression models to guide urban planning strategies

PUBLICATIONS & RESEARCH

• **AI-Driven Analysis of Parkinson's Disease**

(Ongoing Research, Saint Louis University)

Analyzing 250+ fMRI scans and movement disorder datasets using Python, TensorFlow, and predictive modeling, improving early detection accuracy by 20%.

- Applying SQL, Tableau, and Power BI to generate insights aiding clinical decision-making in neurology research.

• **Management of Open Apex and Apexogenesis: A Data-Driven Approach**

(Aug 2022)

(Published in International Journal of Early Childhood Education)

- Conducted research on longitudinal clinical datasets using biostatistical analysis, clinical data mining, and machine learning techniques to evaluate treatment efficacy in endodontics.

CERTIFICATIONS & TRAINING

Python for Data Science.

– LinkedIn Learning **Tableau Essential Training**

– LinkedIn Learning

Machine Learning with Python – LinkedIn Learning **CITI Course Completion**