

SHRUTHI REDDY VUDEM

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PROFILE

Data Scientist with expertise in machine learning (ML), deep learning (DL), and artificial intelligence (AI). Skilled in developing scalable AI models, optimizing ML workflows, and deploying predictive analytics solutions. Strong background in big data processing, distributed computing, and cloud-based AI architectures. Experienced in end-to-end AI pipelines, statistical modeling, and data-driven automation for business intelligence. Passionate about leveraging AI/ML to enhance efficiency, automate processes and optimize real-world decision-making across industries.

TECHNICAL SKILLS

- **Programming & Analytics:** Python, R, SQL,
- **Machine Learning & AI:** TensorFlow, PyTorch, Scikit-Learn, XGBoost, NLP, LLMs, Generative AI
- **Big Data & Cloud Computing:** AWS (S3, Glue, Lambda, Redshift), GCP (BigQuery, Vertex AI), 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

EDUCATION

Master of Science in Health Data Science
Saint Louis University, Saint Louis, USA

(Expected Jan 2026)

Bachelor of Dental Surgery
Panineeya Institute of Dental Sciences, INDIA

(Dec 2023)

EMPLOYMENT HISTORY

Research Assistant - Data Analyst
Saint Louis University , USA

(From Sep 2024)

- Designed and implemented deep learning models (CNN, Transformer) improving model accuracy by 15%.
- Orchestrated scalable ETL pipelines, reducing data processing time by 30%.
- Conducted statistical analysis on structured/unstructured datasets, optimizing feature engineering for AI-driven healthcare solutions.

Data Visualization Intern
Excelerate , USA

(Jun 2024 – Jul 2024)

- Optimised and created **interactive dashboards (Tableau, Power BI, Looker)** to visualize key business metrics, improving decision-making speed by **20%**.
- Built robust **ETL pipelines using Python (Pandas, NumPy), SQL, and AWS Glue**, streamlining data extraction and transformation.

- Developed **predictive analytics models** to track performance trends and optimize business strategy.

Clinical Data Associate

(Dec 2021 – Dec 2023)

Waterley Pharmaceuticals, INDIA

- Applied **AI-driven predictive models** (**Random Forest, Logistic Regression**) for clinical trial analysis, improving accuracy to **85%**.
- Optimized **SQL queries and stored procedures** for large-scale clinical datasets, reducing query execution time by **40%**.
- Created **data visualization reports** for biostatistics and decision-making, facilitating key business insights.

PROJECTS

Predictive Analytics for Auto Rental Optimization

- Developed ML models (**XGBoost , KNN , Logistic Regression**) with feature engineering and hyperparameter tuning.
- Achieved **92% accuracy** in predicting driver cancellations, reducing service disruptions by **20%**.

AI-Driven Technology Impact on Academics & Life Satisfaction

- Applied **advanced regression modeling** (**OLS, Ridge, Lasso**) to analyze General Social Survey (GSS) data.
- Identified key correlations between technology use and education performance using python , R .

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.
- Leveraged **SPSS, R, and predictive modeling** to increase diagnostic accuracy by 15%, optimizing clinical protocols for improved patient outcomes.

CERTIFICATIONS & TRAINING

Python for Data Science – LinkedIn Learning

Tableau Essential Training – LinkedIn Learning

Machine Learning with Python – LinkedIn Learning

CITI Course Completion