Sampat Bandlamudi

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EDUCATION

The University of Texas at Dallas   **Richardson, Texas**
B.S. in Data Science   *Expected Graduation, May 2026*
- o **Related Coursework:** Machine Learning, Database Systems, Probability, Big Data Management, Applied Linear Models, Statistical Learning, Data Structures and Algorithms, Data Analysis in R, Software Development with Java and C++, Theoretical and Advanced Calculus, Linear Algebra, Discrete Math

SKILLS

Programming: Python, R, C++, Java, JavaScript, HTML/CSS, SQL, PHP
Libraries and Tools: Scikit-learn, TensorFlow, Keras, PyTorch, Pandas, NumPy, ggplot2, Seaborn
Techniques: Linear and Logistic Regression, K-Means and Hierarchical Clustering, Decision Trees, Random Forests, SVMs, PCA
Certifications: Programming Using Python, Relational Database and SQL, Data Science and AI, Project Planning

EXPERIENCE

UTD Capstone - MITEG: AI/ML Modeling for Predictive Oncology Research   **Richardson, Texas**
AI/ML Specialist   *Aug 2025 - Present*
- Partnering with MITEG, under direct mentorship of the company President and regular meetings with the CEO, to develop predictive ML models for breast-cancer outcomes.
- Building multi-omics pipelines on TCGA-BRCA (training) and METABRIC (validation) datasets.
- Designing two-stage validation (biomarker-level + model-level) targeting AUC of at least 0.80.

Patient-Link: Clinic Management System   **Richardson, Texas**
Team Lead   *Jun 2025 - Aug 2025*
- Led a team of five in the end-to-end design and implementation of a full-stack web application intended to replace an inefficient, spreadsheet-based workflow for a medical clinic.
- Architected a relational database in MySQL, creating an ER model and logical schema. Normalized all relations to 3NF to ensure data integrity and eliminate anomalies as well as enforcing referential integrity with foreign key constraints.
- Developed a multi-user web portal using PHP and HTML/CSS, allowing role-based CRUD operations.

Hotel Room Ratings Regression Analysis   **Richardson, Texas**
Team Member   *Feb 2025 – May 2025*
- Devised data preprocessing for 3,000+ hotel bookings, cleaning data through parsing error correction, imputation, and feature engineering to yield 2,705 analysis-ready observations.
- Directed comprehensive EDA in R in order to identify hotel rating and log(RoomPrice) as key predictors of guests
- Engineered and implemented an OLS regression model using AIC-based stepwise selection, explaining 74.6% of variance in room ratings.
- Performed model validation, including VIFs below 1.2, residual analysis, and also Cook's distance evaluation for influential points.

Netflix Content Release Analysis   **Dallas, Texas**
Team Member   *Sep 2024 - Dec 2024*
- Developed classification models, including Random Forest and Logistic Regression, to analyze historical data and identify key predictors for content viewership.
- Applied K-Means clustering to segment content genres based on historical viewership data, which helped identify distinct viewership patterns.

ACTIVITIES AND LEADERSHIP

Alliance Ground International   **Irving, Texas**
Passenger Service Agent   *Jun 2024 - Mar 2025*
- Contracted to Sun Country Airlines, facilitating key passenger operations including baggage check-ins, ticket sales, and flight boarding at the gate.

BizInstitution   **Coppell, Texas**
President & Co-Founder   *Jul 2022 - May 2023*
- Co-founded and scaled a student-led initiative from concept to an organization of 10+ active members.
- Created the entire non-profit website where anyone could access to watch educational content across many courses.