

# 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:** 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

**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

### 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

- Created a predictive engine using classification (Random Forest, Logistic Regression) and time-series forecasting models to identify optimal release windows for new Netflix content
- Implemented advanced feature engineering using historical viewership data and utilized K-Means clustering to segment content genres, achieving 90% accuracy in identifying viewership patterns as well as in predicting genre-specific peak demand

### Intelligent Weather Forecasting Bot

Richardson, Texas

Personal Team Project

Sep 2024 – Nov 2024

- Integrated public weather APIs with an AI module using historical data, improving forecast accuracy by 15%
- Developed an IRC bot that processed over 10,000 API calls, reducing user query response time by 30% through machine learning optimizations

### Senior Shield

Richardson, Texas

Axxess Hackathon 2024

Feb 17 - Feb 18, 2024

- Led a team in a 24-hour hackathon to design and prototype "Senior Shield", a proactive elderly care mobile solution
- Designed essentially the entire UI in HTML/CSS using Apple Xcode and the Apache Cordova framework
- Implemented user authentication, enabling account creation and secure login functionality

## 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
- Filed a Certification of Formation with the Texas Secretary of State