SDSU | San Diego State University

# Predicting Student Attrition Through Housing Data


Team -

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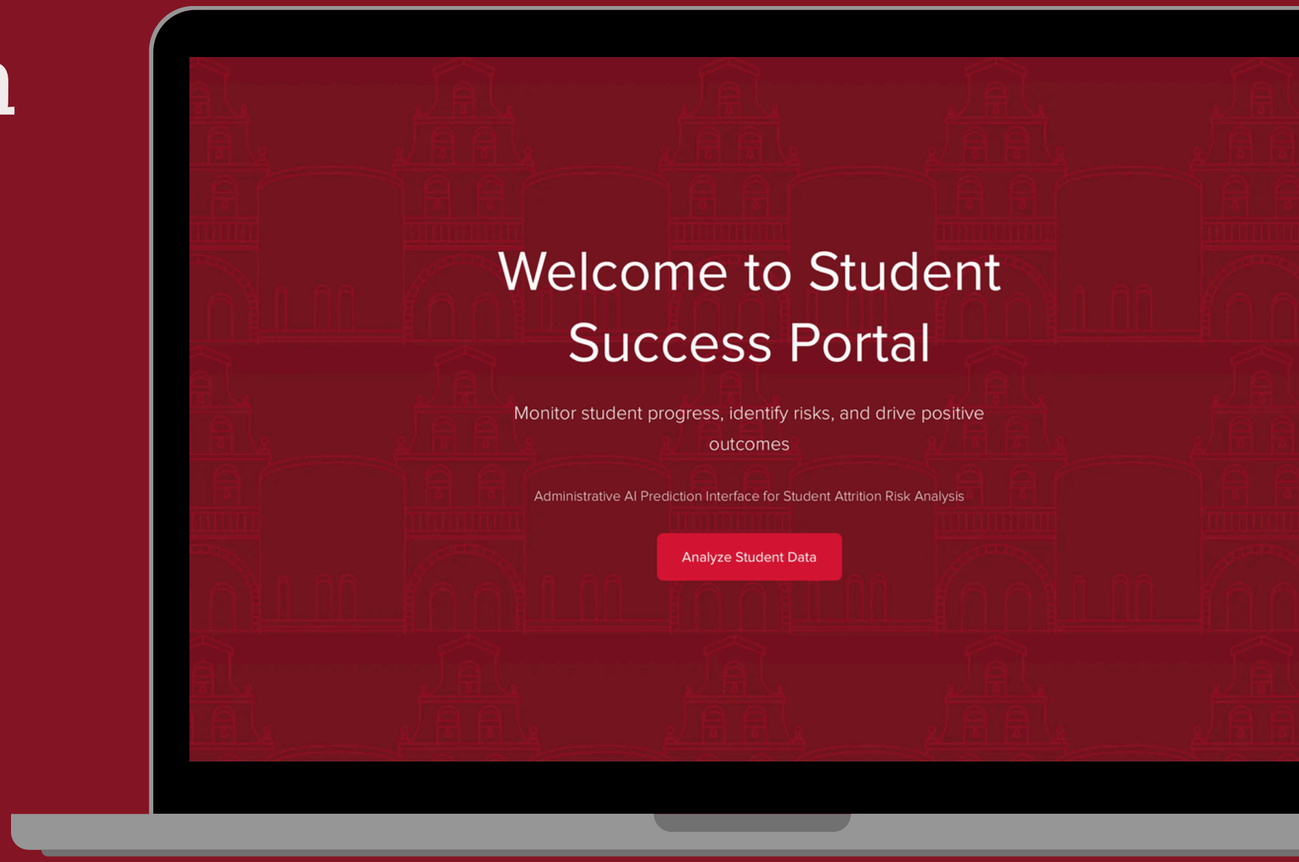

# Meet the Team

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# The Problem

**$20,000+**

**Annual Housing Revenue lost for every freshman student who drops out**

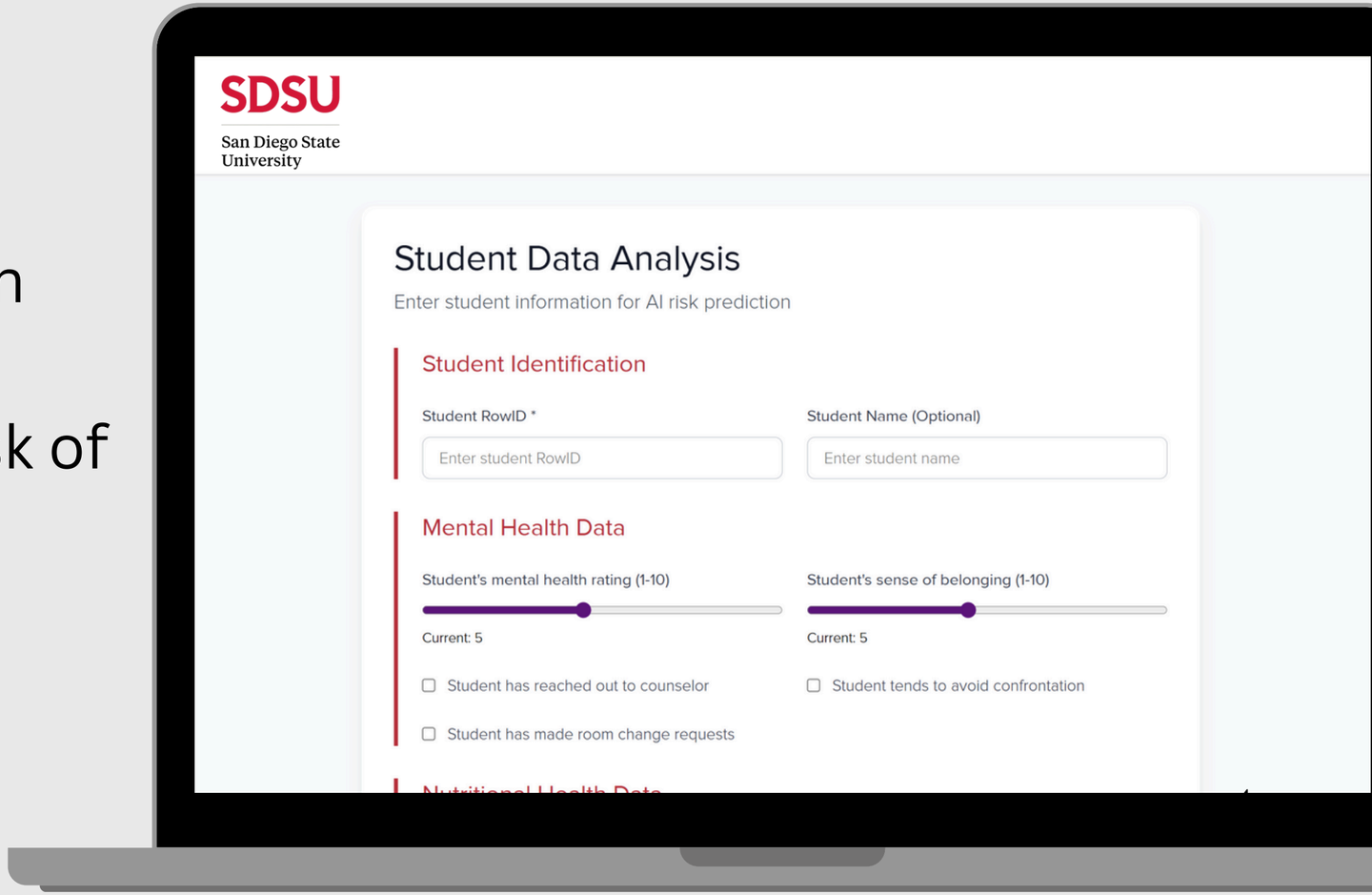
**75%**

**of SDSU students live off-campus**

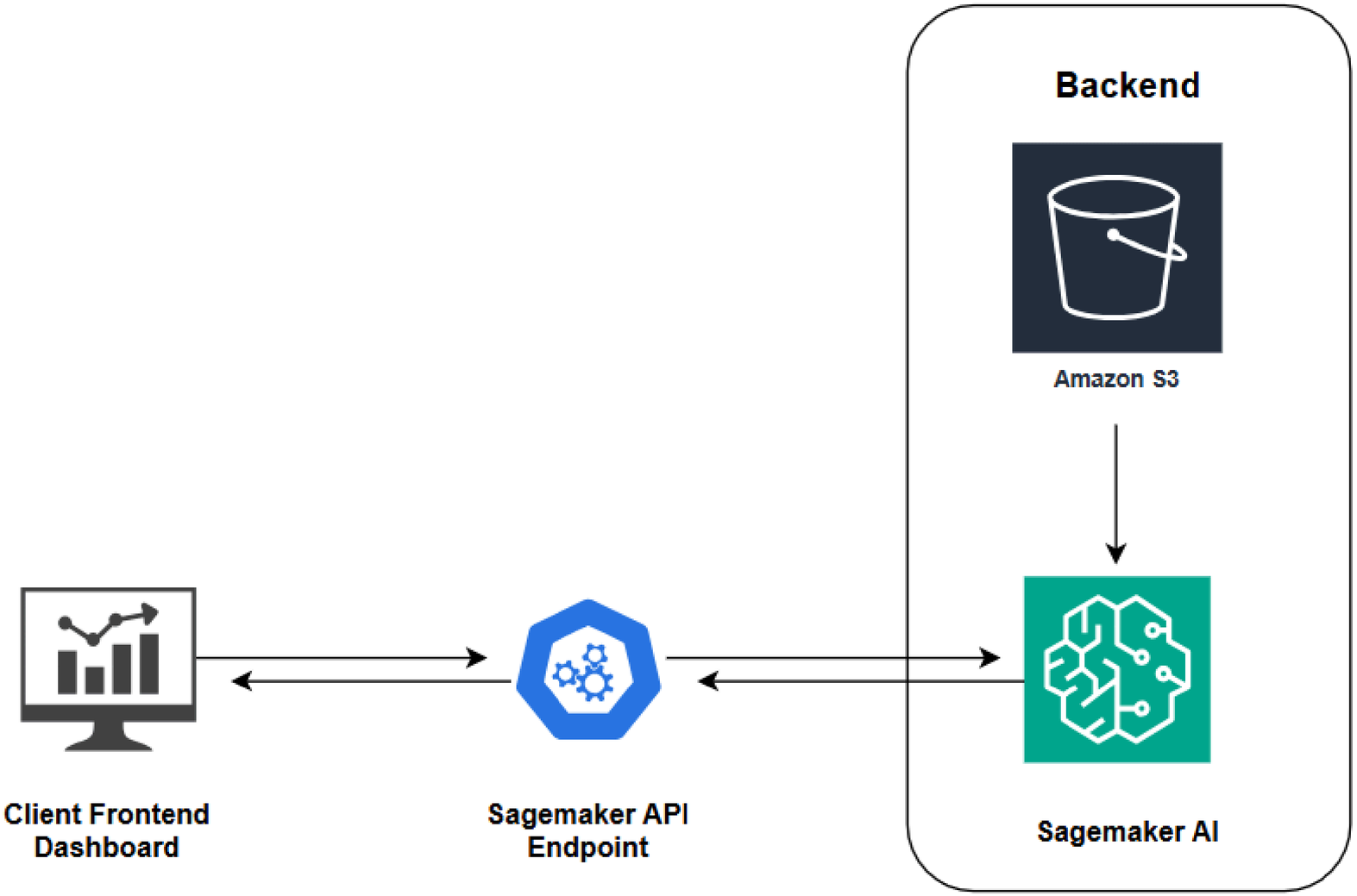
https://www.usnews.com/best-colleges/san-diego-state-university-1151/student-life
https://housing.sdsu.edu/_resources/documents/first-year-rate-sheet-2024-2025.pdf

# Dashboard Features

- Dashboard structured around customer needs: **housing administration**.
- Includes **main portal** and **student information form** based on chosen data columns.
- Submission results in student's risk of dropping out and contributing factors.



# Project Structure




System Architecture

# Project Design

## Dataset

StarRez Housing Data (***16 out of 23 CSU campuses*** use this system), Student Preferences survey, Housing assignment data, Learning communities and Academic Performance

## Data Processing

**Tools utilized**: Jupyter Notebook, Copilot, Pandas

1. Created an EC2 server and virtual environment to host a Jupyter notebook.
2. Imported Pandas libraries and csv file data
3. Explored an AI predictive analysis model
4. Performed data transformation in the form of encodings.

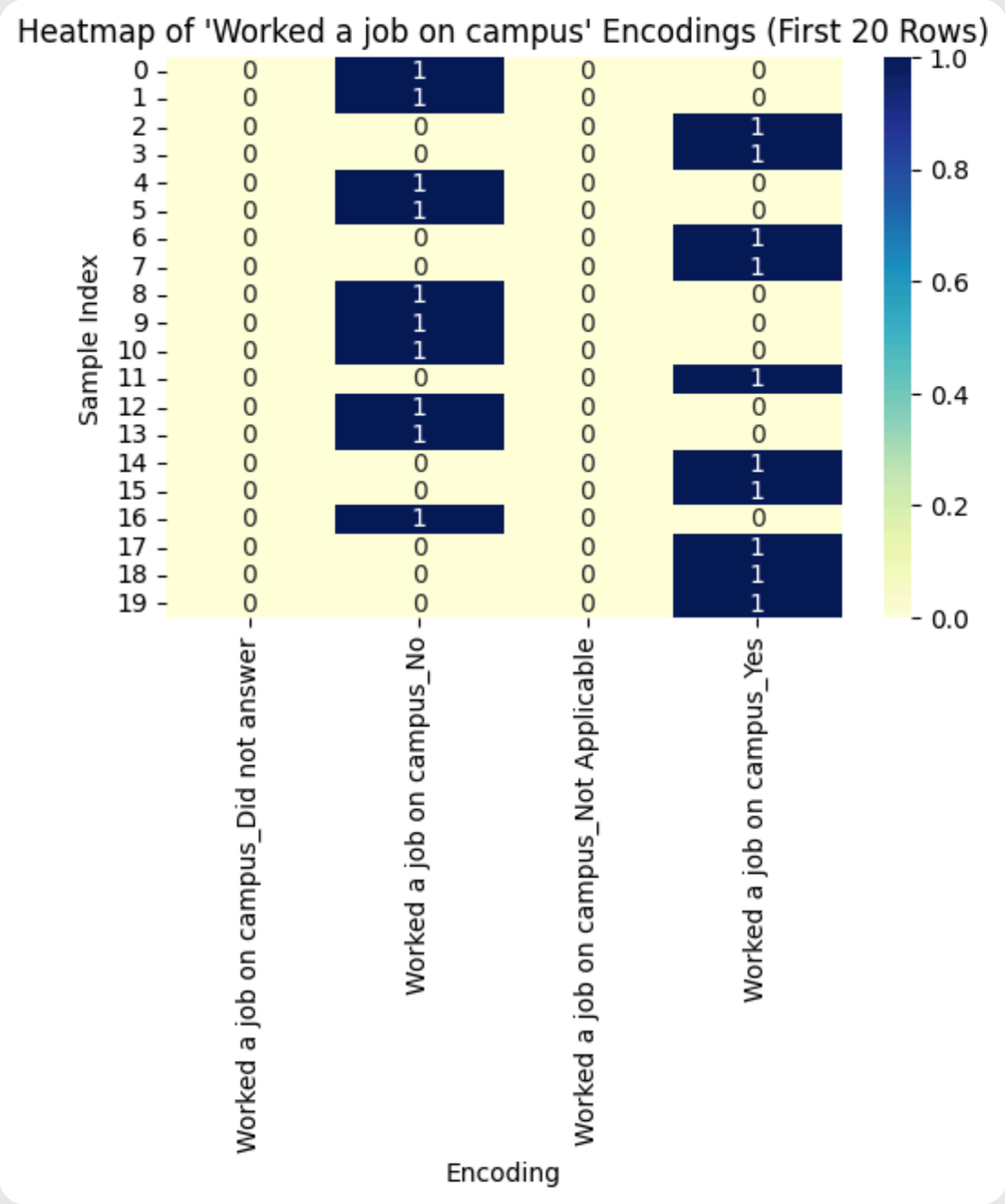
## Model Training

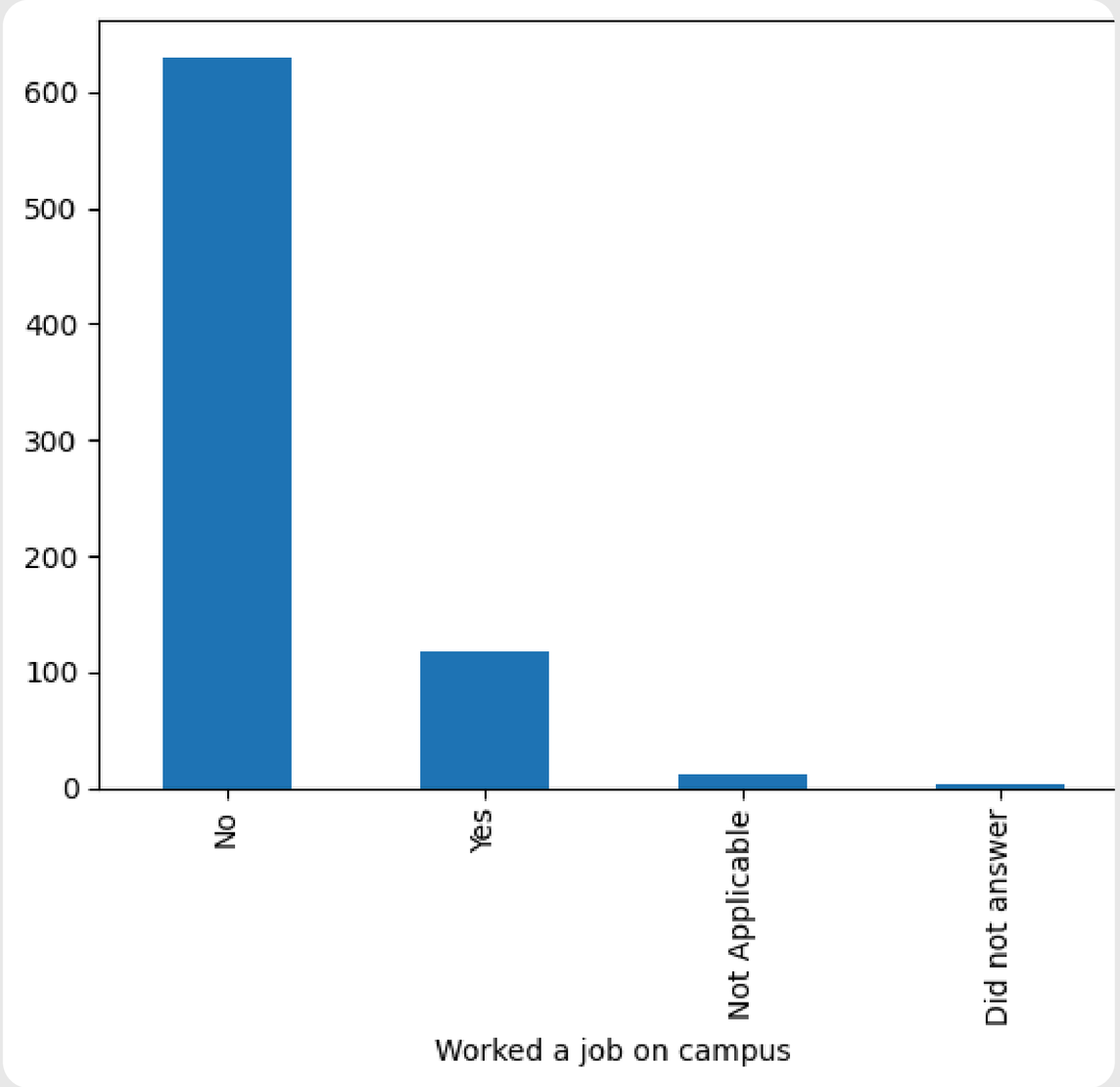
Cleaned data was utilized for model analysis:

- **Logistical Regression**
- **Random Forest**
- **Sigmoid Neuron**

**Sigmoid f1:** 0.86

# Data Visualization and Heat Maps




DEMO
TIME!

**Think Retention.**

**Predict the Future.**

**Empower Every Student.**

Also, thank you to our mentor, Spandan!

# Thank you!

## Any questions?