



Engineering Student Placements

Group 4

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Goals

Build a Machine Learning model to predict whether a student will be selected for an internship based on several factors.

Reason For Selecting This Topic

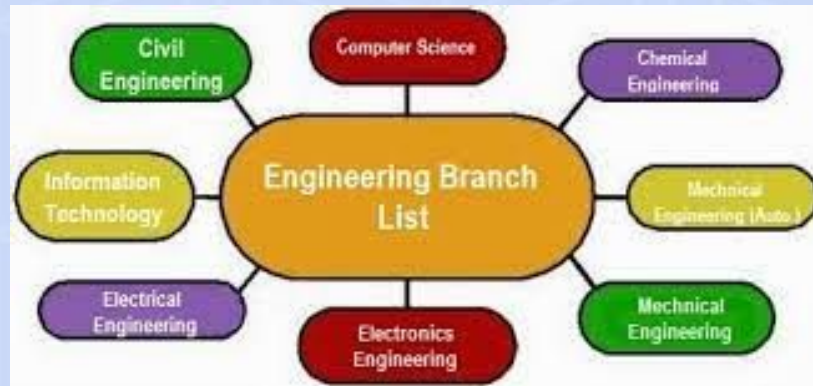
Students are in the beginning of their career and it is a challenging time for them to gain the experience needed to put them in the workforce. Understanding the data available from career services in colleges and universities will help these organizations in supporting the students to land in their dream job. Our success in developing such a model will enhance student experience and provide each one with the right guidance to start a career of their choice.

Data Source

The data was sourced from Kaggle from an Engineering Placement dataset which features the following relevant factors:

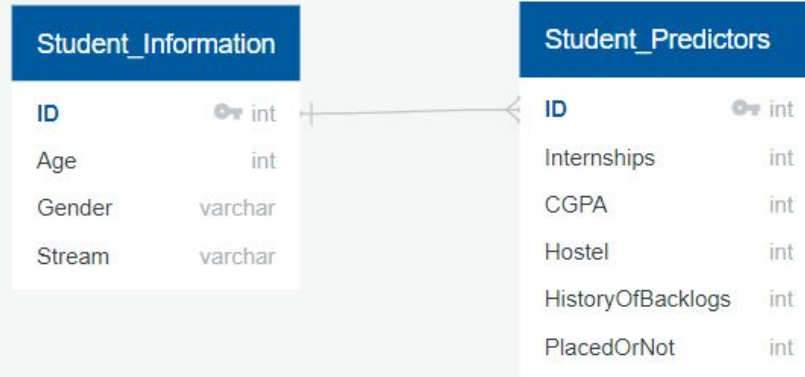
- Age
- Gender
- Field of Study
- Past Internships
- Cumulative Grade Point Average (CGPA)
- Dwelling Provided
- History of Backlogs

Questions

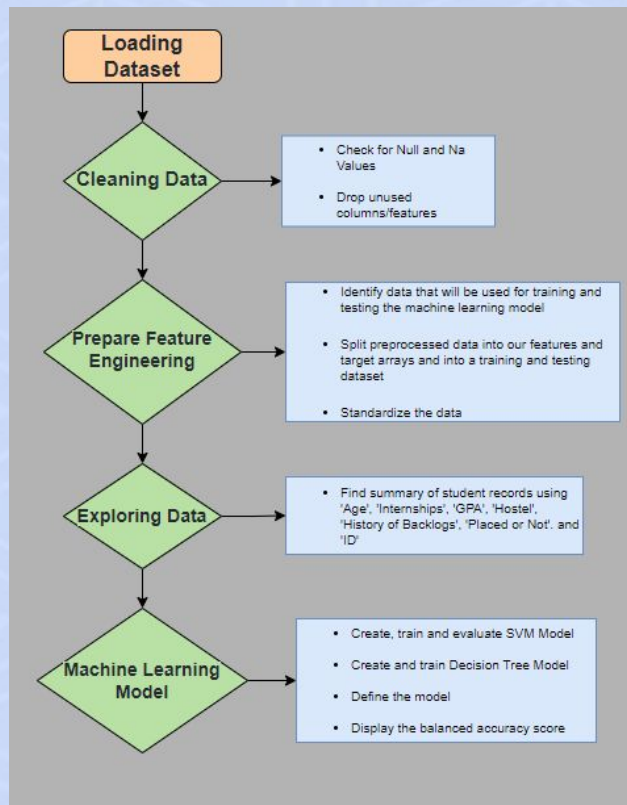


Database Integration

- PostgreSQL
- Join Tables: Student_Information & Student_Predictors
- Database Host: AWS RDS Service
- Database Server: capstone-project



Machine Learning Model



Machine Learning Model Type: Classification model

Utilizing the features mentioned from the dataset, we are going to train a classification model - a subcategory of Supervised Machine Learning – to determine the likelihood of acceptance for future applicants. The following are the steps we will take for data preprocessing.

```
# Evaluate the model using the test data
model_loss, model_accuracy = nn.evaluate(x_test_scaled,y_test,verbose=2)
print(f"Loss: {model_loss:.4f}, Accuracy: {model_accuracy:.4}")
```

```
10/10 - 0s - loss: 0.3162 - accuracy: 0.8418 - 169ms/epoch - 17ms/step
Loss: 0.3162, Accuracy: 0.8418
```

Decission Tree model accuracy: 86.53%

SVM model accuracy: 88.55%

Description Of Tools Used to Create Final Dashboard

We chose to use Tableau to create the final dashboard. Tableau is a powerful interactive visualization tool that transforms data into a format that is ideal for presentation.

By using the cleaned CSV, three visualizations were created based on:

- Gender
- Engineering discipline
- CGPA

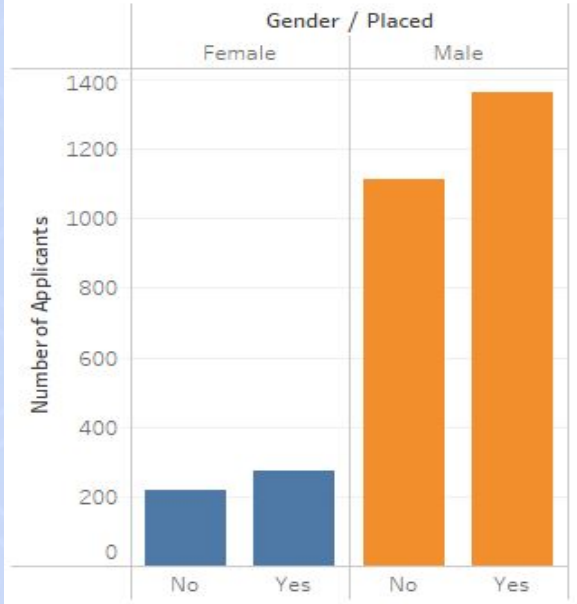
Description of Interactive Elements

1st Interactive Element

Gender

Our second graph shows the amount of applicants that were either placed or not solely by their gender

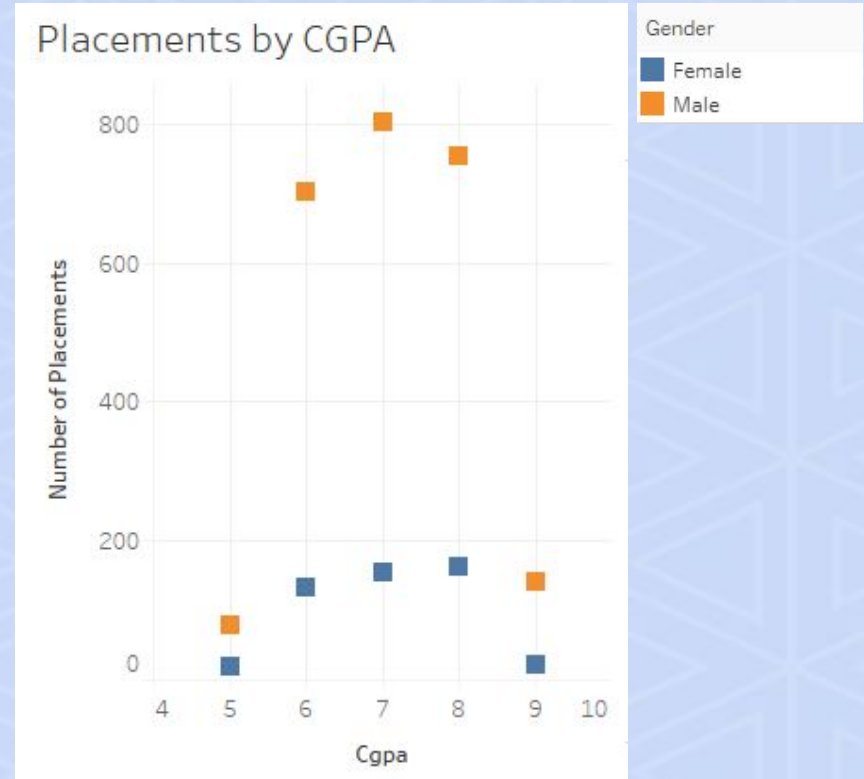
Placements by Gender



2nd Interactive Element

CGPA

Our first interactive element is a scatter plot that shows the amount of internship placements based on the applicant's Cumulative Grade Point Average

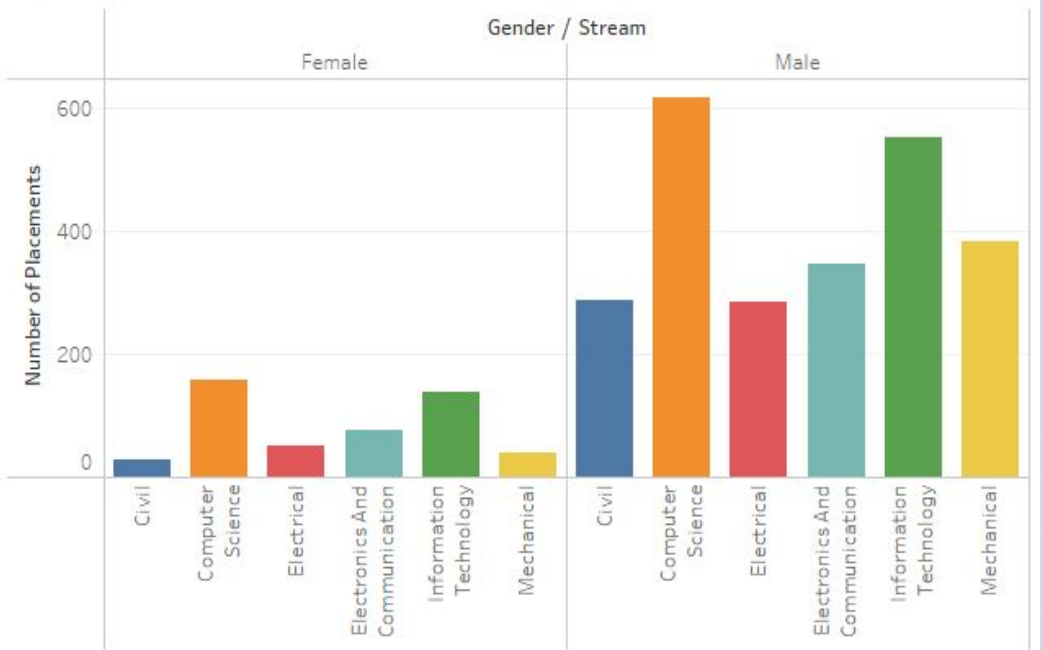


3rd Interactive Element

Discipline

The third visualization shows the number of placements by an applicant's field of study, and then split by gender

Placements by Field



Thank you for listening!

Q&A