C_Scores

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HARVEY MUDD COLLEGE

Summary

All HMC students taking Software Development or the Clinic program take Parker Team Player Score survey at the start of these courses. The C_Scores app aims to help users learn more about what makes a good team and construct better teams.

Architecture

We used Ruby on Rails to create the web application. Important technologies and their roles are:

- D3 – JavaScript library responsible for creating graphs
- Devise – Ruby gem used to create user accounts and security
- Python – Prediction is handled by a python script. SQLite Database
- Bootstrap – For CSS styling

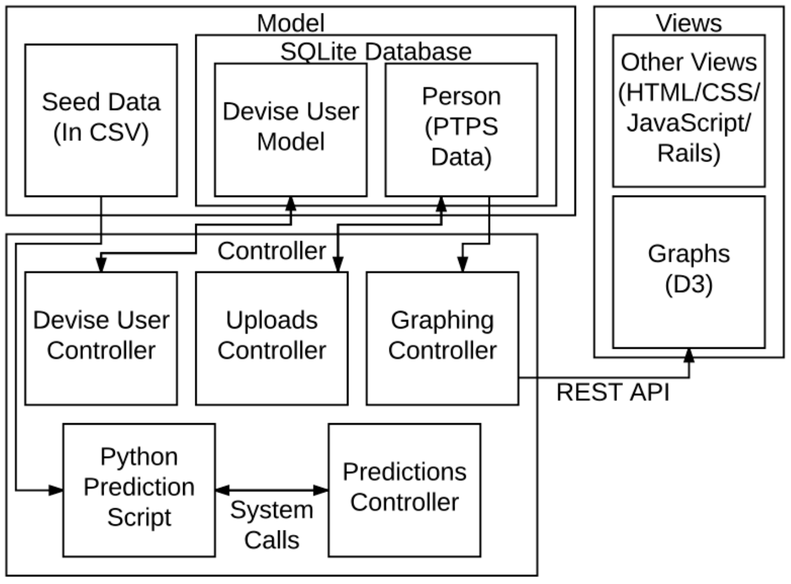

Figure 1.
Architectural model.

Functionality

Insights

After uploading data, the user can view two graphs and statistics. –

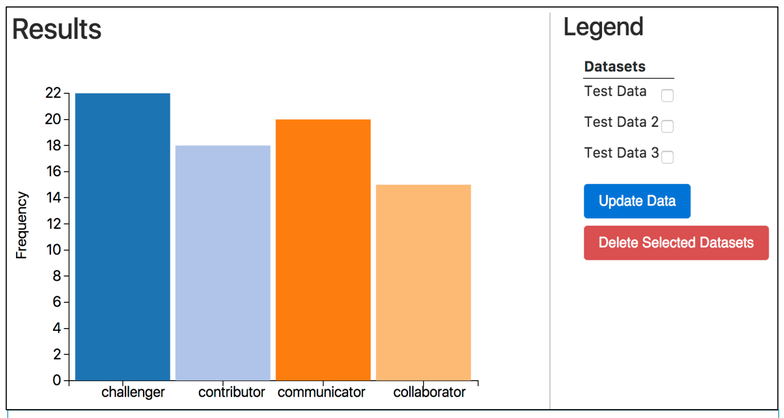

Figure 2.
Bar graph displays team player style distribution.

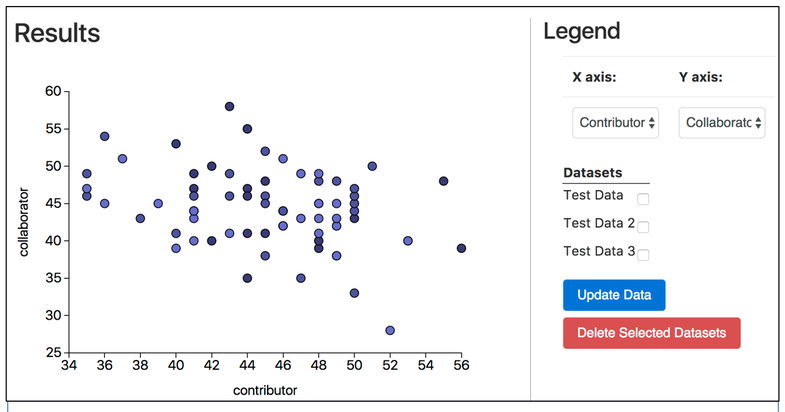

Figure 3.
Scatter plot allows the user to look for correlations between style scores.

Available statistics include:

- Survey questions answered similarly by people of each style.
- Most popular secondary style for people of each style.

Prediction

A clustering algorithm classifies hypothetical teams using past data to make predictions about team success.

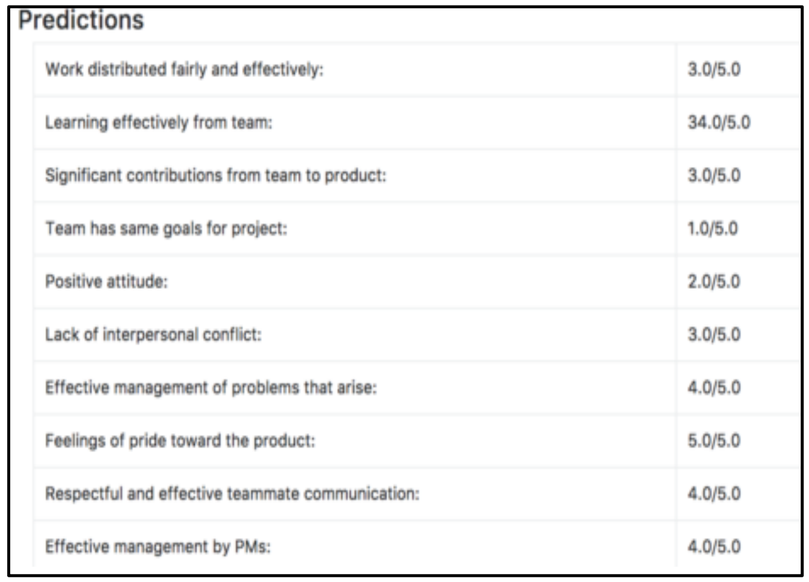

Figure 4.
Predictions in ten success categories.

What is the PTPS?

The PTPS asks questions about how one functions in a team, and assigns scores in 4 areas, called 'team player styles': Challenger, Contributor, Communicator, and Collaborator.

Future Work

- Add additional insights
- Use future data to improve predictions algorithm
- Add to types of predictions made
- Add trendline to the scatterplot