Visualization of Predictive Enrollment

Sponsor: Washington State University
Enrollment Information Technology
Mentor(s): Chris Cordodor, Will Warfel
Zachary Allen, Connor Fleming, Tim Vierow, Ben Windishar-Tatham

**Project Background**
This project aims to help the Enrollment Information Technology (EIT) team predict which potential students are most likely to attend Washington State University (WSU). By automating part of the recruitment process, recruiters can focus their attention on better students that have more interest in WSU which will improve the quality of student classes. Using data from past and current WSU students, the team created a system that assigns a prioritization score to each prospective student based on indicators. Indicators represent EIT’s enrollment goals and probability of attendance.

**EMAS Database:**
- Enrollment Management Action System
- Database holds information on students
- Collected data comes from applicants and third parties
- Stages represent student progression in the enrollment process

**Data Import:**
- Import data as VTypeCodes from EMAS
- Import student-VTypeCode relations

**Data Collection:**
- Calculate frequencies of each VTypeCode

**Data Analysis:**
- Calculate attendance trends
- Interpret trend data as attendance indicator values

**Result Interpretation:**
- Interpret trend data as attendance indicator values

**Student Prioritization:**
- Student priority scores calculated from indicators and confidence

**Visualization of Data Analysis**

**Indicator Analysis**
- Indicator value is derived from the average percent change in student population by stage.
- Indicator confidence is derived by comparing the number of students with that indicator to the total number of students at that stage.

**Student Prioritization**
- A student’s priority score is composed of three indicator types
  - Student priority score is the summation of indicator scores multiplied by student confidence
  - Student confidence is derived from the number of indicators possessed

**Future Work**
- Analysis over multiple semesters
- Additional data mapping for attendance indicators
- Improve indicator value and confidence evaluation of students

**Glossary**
- EIT: Enrollment Information Technology
- EMAS: Enrollment Management Action System
- WSU: Washington State University
- VPN: Virtual private network
- GUI: Graphical User Interface

**Acknowledgements**
We’d like to give a special thanks to Chris Cordodor and Will Warfel for providing weekly feedback. Additionally we’d like to thank Brad Wickett for walking us through the User/Control template and Stephanie Kane for providing statistical analysis feedback. We’d also like to thank all the counselors from the recruitment offices that offered us advice on how to make our program fit their interests.

**Team Lannister**