Whitserve Project Management Plan and Timeline

Intro to Data Science

Data Analysis Project Description and Project Management Plan with Timeline

1. April 2025
2. Our group will be conducting research on how educational factors influence one’s decision on coming to Whitworth for their future education. We will specifically focus on how different majors at Whitworth university rank how important their education is through various factors that we have determined as “educational” prompts. These consist of:



- “The content of the courses within my major is valuable.”

- “Nearly all of the faculty are knowledgeable in their field.”

- “The instruction in my major field is excellent.”

- “I am able to experience intellectual growth here.”

- “The quality of instruction I receive in most of my classes is excellent.”

- “Major requirements are clear and reasonable.”

- “There is a commitment to academic excellence on this campus.”

- “The assessment and course placement procedures are reasonable.”

- “Academic reputation as factor in decision to enroll.”

- “Tutoring services are readily available.”

Additionally, we will also look at students’ satisfaction level with these educational prompts. Along with the students’ major being a target variable, we also will look at students class year as our other target variable, of which we will conduct identical research with respect to importance and satisfaction level.

Furthermore, we will compare our findings between each of the three years for which we have data. There is also an option to compare our findings using Whitworths data to other private universities in which we have data on as well, albeit it is limited in comparison.

2. The purpose of this research is to take a detailed look at the data given to us and try to understand what the data says and how it can predict the future of new students that will come to Whitworth. We as the researchers are going to recommend how to change Whitworth using past data. This research will ultimately be used to make changes to Whitworth’s programs or priorities in order to keep students engaged and interested in the school.

3. This research is for Greg Orwig who is the Assistant Vice President, Research & Innovation at Whitworth who will use the research we do to make Whitworth a better place for new and existing students.

4. Why this research is important.

The research that we’ll be doing on Whitworth’s data is important because it will help staff and faculty to find ways to better support the students within their major. Our goal is to reveal academic barriers that students in certain demographics are facing. We decided to focus on Major as a target variable because our analysis will be focused on the poll questions that are specifically academic, i.e. “My academic advisor is knowledgeable about requirements in my major”. By focusing on how this varies across majors, it will allow staff at Whitworth to identify critical points of improvement to ensure that students are in a positive and excellent academic environment.

We will also be focusing on Class Year as a target variable. There can be a large discrepancy between underclassmen and upperclassmen in terms of knowledge of courses, familiarity and friendliness with professors, etc. Students in different class years can have different needs from their staff and faculty, and our goal is to identify problems specific to freshmen, sophomores, juniors and seniors. This is important because it help staff and faculty become aware of problems students in a class might be facing and assist them academically.

**Project Description and Management Plan**

Dr. Orwig provided us with data from polls conducted in 2018, 2021 and 2024. Each of us are going to focus on performing EDA on the data sets from each of those years. We will each perform some Bayesian analysis on a year’s worth of provided data.

* Ethan will focus on 2018 data
* Nathaniel will focus on 2021 data
* Liam will focus on 2024 data

After we have each performed some individual analysis, we will reconvene and assess the findings of our analysis, as well as significant differences between the 3 sets of data. Then, in a second stage, we will perform analysis utilizing neural networks. We will again reconvene and assess the findings of our data set. If we believe that there are unexplored factors that could yield useful findings, we will conduct further research. We will upload all code to WhitGit, as well as screenshots showcasing our analysis.

We will then all work together to develop an interesting presentation showcasing the findings of our EDA.

Timeline:

April 22, 2025 – Developed our Whitserve Project Management Plan and Timeline

April 24, 2025 – Check-in with questions or reestablish ideas/process, hopefully will have additional data from Greg

April 29, 2025 – Each group member should have an initial data analysis conducted at the bare minimum.

May 1, 2025 – Each group member should be close to finished if not finished with their data analysis. Can troubleshoot in class if problems arise

May 6, 2025 – Troubleshoot any additional problems in class. Start comparing findings amongst data over the 2018 vs. 2021 vs. 2024. Begin building the presentation

May 8, 2025 – Finish the presentation

May 13, 2025 – Present Data Analysis in Class

* Can meet outside of class if need be