Ben Fuqua

**Personal Background**

I have taken CS 450 and CSE 350 but I haven’t taken MATH 425 and MATH 488, I plan on taking these courses in Spring and Winter Semesters respectively. I am wanting to go into Data Science as my career, I already have been working as a data scientist at a company now for about 9-10 months. My byui email is [fuq17002@byui.edu](mailto:fuq17002@byui.edu).

**Project Background**

For my senior project I am wanting to research outlier/anomaly detection methods and transformations. I have always been curious about these two topics but BYUI doesn’t have classes that address these topics to sufficient detail. I have already found some good research papers and technical documentation that explains how they work. I will also want to work with my professor to better understand the math behind these two topics and why they work. I have data from my company, which is full of outliers, on which I can run these methods to see the before and after.

**Domain to Investigate**

My topic really isn’t domain specific, outlier detection and transformations are methods and theories that are applied to any type of data in any domain.

**Proposed Deliverables**

I wish to have a deep understanding of outlier detection methods so I could write a paper on the various methods used and what they look like before and after. One specific deliverable I would like to provide is a decent course outline so the research and examples I find/use while doing this project could be used as a course in the future to help other students understand this topic and benefit from my work.

**Faculty Request**

Brother Johnson would be the first teacher I would want to work with due to his statistical background and PHD

Brother Palmer would be the next teacher I would want to work with, I have had him in previous semesters and enjoy working with him.