**Senior Project Proposal**

Bryce Blignaut

Your proposal should be about one page in length. It should include the following sections and information:

**Project Overview**

I am developing an issue timeseries forecaster for the BYU-I call center. This forecaster will allow management to see the volume of issues by hour/day for an entire year. I will also be creating an automated process to retrain the forecaster with new data on a daily basis and

will ensure the predictions are as accurate as possible.

I am motivated to finish this project because it will allow me to build an end to end data science solution that will provide value and be used by BYU-I to further it’s mission. The data I need will be pulled via an API from BYU-I’s ticketing software.

This project will be a great resume builder, but I can also confidently say I built something by myself from scratch that provided tremendous value.

**Areas of Research**

I will mainly be developing in Python and I will need to learn more about API’s and Timeseries forecasting models.

The models I will definitely be using are XGboost regressor and Prophet.

**Proposed Deliverables**

Build TD report for api extraction

Build dataset (Create api call functions and extract large amount of data for training)

Build request process from TD API

Build automated wrangler

Build Prophet/ XGboost algorithm and automated training process

Host application on Heroku

Connect Power BI to csv

Build visuals and methods for customers to consume data.

**Proposed Timeline**

Defining a scope of work and setting appropriate deadlines are important skills. In this section, try breaking your project down into smaller pieces and putting a goal completion date on each. (Weekly goals may be too granular - I would recommend trying to write bi-weekly goals.)

Build TD report for API extraction Week 1-3

Build dataset (Create API call functions and extract large amount of data for training) Week 1-3

Build request process from TD API – Week 4

Build automated wrangler – Week 5

Build Prophet/ XGboost algorithm and automated training process – Week 6, 7, 8

Host application on Heroku Week-9

Connect Power BI to csv Week 9-10

Build visuals and methods for customers to consume data. Week 10 – 14