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MSDE692\_X40  
Week 1: Project Proposal**

**Practicum 1 Project Proposal**

As we are heading into yet another general election cycle, one of the many political hot topics that will arise is how to fix the U.S.’s immigration system. Being caught in the middle is the Border Patrol who are regarded by both parties as under-manned, and under-funded. Regardless of political lines, and various effects on our economy, illegal immigration can be examined and dissected through the lens of data science. Hopefully, this project will provide insights into how and where resources are needed in the effort of fixing the immigration problem in America.

For my project, we will be taking a look at the Border\_Crossing\_Entry\_Data.csv taken from <https://www.kaggle.com/divyansh22/us-border-crossing-data>, which is provided by the U.S. Bureau of Transportation Statistics. This dataset is compiled from January 1996 to February 2020 with seven columns/attributes and almost thirty-five thousand data points. We will perform Exploratory Data Analysis on the dataset to identify interesting insights from this dataset such as entry occurrences by states and comparing the entries between Canadian border versus the Mexican border. We will also utilize the matplotlib library to construct various charts and graphs for our exploratory analysis on the dataset. Next, we will construct the ARIMA (Autoregressive Integrated Moving Average) model to predict the influx of border crossings in the next five years. In the end, we will form a recommendation plan for proper resource allocations based on our model’s forecast for each region. Below is my timeline for the next seven weeks for this project.

Week 2- Clean the dataset

Week 3- Perform exploratory analyses

Week 4- Create graphs/charts

Week 5- Construct the ARIMA model

Week 6- Create presentation

Week 7- Revise codes and finalize presentation

Week 8- Present project and provide feedbacks to classmates

Reference:

* Agrawal, D. (04/20/2020). Kaggle: US Border Crossing Data. Retrieved on 05/08/2020. <https://www.kaggle.com/divyansh22/us-border-crossing-data>
* (07/11/2019). BBC News: Is there a crisis on the US-Mexico border? Retrieved on 05/07/2020.   
  <https://www.bbc.com/news/world-us-canada-44319094>