# Project 1: show high risk areas for forest fires the western U.S

Description

Because of Climate change, urbanization, negligent smokers and many other factors forest fires have become a frequent in the west. I would use online data predictive models to show which areas are at risk of having a wild fire. I would use predictive models and heat maps to show high risk areas. Python would be used to clean organize and get insights. Tableau would be used to show heat maps.

Deliverables

1. Python code used to clean and analyze data
2. Data frames used in python
3. graphs to show risk based on area
4. Tableau dashboard with heat maps to show high risk areas

Learning objectives

1. Learn what causes wild fires
2. Use python to properly analyze and manipulate data frames
3. Practice visualization with tableau to accurately represent the topic

# Project 2: Time series analysis on the increase in poverty in the U.S(Using an LSTM model)

Description

Changes in policy, inflation, and lack of growth in pay have contributed to an increasing gap between the rich and the poor. My goal would be to create an lstm model to predict the growing poverty rate based on these factors. I would used jupyter notebook, and python to build a LSTM model to predict how poverty will increase or decrease. I would present my finding with graphs from the matplotlib library in python

Deliverables

1.python/jupyter notebook source code

2. data frames created from data collected

3. Lstm predictive graph the shows how accurate the model is in testing

4. actual prediction over some amount of time

## Learning objectives

1. Learn what exactly is causing the increase in poverty
2. Learn how to put data together to create models
3. Learn to build accurate predictive models

# Project 3: Predict housing prices with regression analysis

Description

Housing prices have been on the rise because of many factors. These include higher interest rates, inflation and the buying of homes by corporations. I would use Linear regression to create a model to predict the price of a new home. The price would depend on many factors including, location, size, and amenities

Deliverables

1.Python source code for price prediction script

2.dataframe with fields that include factors along with the predicted price

3. heat map showing highest and lowests prices

## Learning Objectives

1.Learn the factors that increase housing prices

2.create accurate regression formulas

3. create useful dataframes for analysis