Scope of Work

1. What is the Severity and Frequency of Flood & Fire Damages?
   1. Fire:
      1. Frequency: - **Dataset: Residential/Non Residential Dataset (Preston)**
      2. Severity (Option B): - **Dataset: Residential/Non Residential Dataset**
         1. Calculation: **Total amount Loss / Claims**
         2. Assumptions: Each Cause is a Claim
      3. **PLOT: HV PLOT**
   2. Flood:
      1. *HAVE TO ANALYZE FEMA DATASET SEE IF DATA IS AVAILABLE! MOST LIKELY IT IS!*
2. What is the Loss Ratio of Fires & Floods?
   1. Fire:
      1. DATASET: **Residential/Non Residential Dataset**
      2. Loss Ratio: - Loss ratio = $ Price Of Claims / Premiums
      3. Create an Array of loss ratios & solve for the premium
      4. **PLOT: PIE CHART!**
   2. Flood:
      1. *HAVE TO ANALYZE FEMA DATASET SEE IF DATA IS AVAILABLE*

1. Average Cost Per Claim
   1. Fire:
      1. **Dataset: Residential/Non Residential Dataset**
         1. **PLOT: AVERAGE COST PER CLAIM (NATION -USA)**
   2. Flood:
      1. **Dataset: FEMA DATASSET**
         1. **PLOT: AVERAGE COST PER CLAIM (NATION -USA)**
         2. **PLOT: AVERAGE COST PER CLAIM (PER STATE)**
2. What is the Risk of flood and Fire in Each State? (Geographical Plot)
   1. Flood:
      1. Can do Flood Risk assessment from creating a Map plot:
      2. **Dataset: FEMA DATASSET**
         1. **PLOT: HEAT MAP OF FLOOD DATA**
         2. **Columns needed: LAT, LONG, COUNT OF FLOOD**
   2. **Fire:**
      1. **Dataset: Residential/Non Residential Dataset**
      2. **Dataset: Housing Unit 2019**
      3. This Can be calculated using the calculation from Frequency & Severity, in Part one.

COMPLETE DATASET:

1. **Residential/Non Residential Dataset**
2. **HOUSING UNIT 2019\***
3. **NST-EST2019-ANNHU\***
4. **FEMA DATASET**

**\*\*\* NUMBER 2&3 Is quite similar Dataset both are Census data**

INCOMPLETE DATASET:

1. **Disaster Declaration Summary – DOES NOT CONTAIN RESIDENTIAL PROPERTY FIRES. \*NOTE: NEED TO REVIEW SOURCE OF DATA**

DATASET NEEDED:

1. FIRE DAMAGES FOR RESIDENTIAL/NON-RESIDENTIAL **PER STATE**