1. **Introduction**

We are especially interested in reasons behind the crime rate in Africa. We will be analyzing the effect of different factors, for example population, GDP, Education level, disbursement, employment rate contribute to the crime rate in Africa.

1. **Data resources**

We collected data from the UN stats org, created by United Nations Statistics Division, and use variables mentioned above to construct the model.

1. **Problem**

Within all the variables, we are trying to find the main effect that causes crime rate to increase in different countries, so that we are able to figure out the best strategies to relief such issue. We want to find the potential connections between different factors leading to crimes in Africa.

1. **Methods**

We would compare and analyze the results that we obtain by applying different regression models, including:

* 1. Linear Regression
  2. Logistic Regression
  3. Ridge Regression
  4. Lasso Regression
  5. Polynomial Regression

It is possible that different models would suggest different conclusions, and we would further analyze the relationship between different variables to figure out why that happens.

1. **Potential Difficulty**

Some variables may be correlated with each other, making it hard to find a decisive reason that concludes what causes high crime rates

**6. Schedule**

**Oct.25-10.30** Data Cleaning&ReviewFeedback

**Nov.1-Nov.7** Data Identification/Processing

**Nov.8-Nov.14** Model Building/Regression Analysis

**Nov.14-Nov.21** Model Revision

**Nov.22-Nov.28** Abstract, Introduction, Model Interpretation and analysis, Conclusion

**Nov29.-Dec.5** Prepare Final Presentation PPT/Rehearsal

**Dec.6** Presentation