Green Analytics

CSE6242 – Fall 2021

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Executive Summary and Objectives

- Over the last 10000 years, we have lost one-third of the world's forest cover, half of which happened in the last 100 years. However, not all kind of economic advancements may be linked with degradation of Forest covers.
- Our objective is to determine what correlations exist between Forest cover changes and socio-economic factors like per capita GDP, Unemployment, Human Development Index etc.
- By bringing multiple such factors together, we can do meaningful analysis of the net effect of these factors on Forest land across countries / continents.
- Most of the current studies are based on a single factor and have not been inclusive of other factors.
- We have created a unique and creative platform to analyze and identify the socio-economic factors that are most relevant to the changes to rate globally / country / region.
- Our project can be utilized by government agencies and independent researchers to derive policy decisions.
- In the short to mid-term, we are measuring the relevance and relationship of the factors with deforestation rate. In the long term, we hope these results would help in conducting deeper studies on the higher ranked factors.

Outcomes

- Forest cover degradation is a complex topic and there could be many localized factors at play. Factors relevant for one country may not be applicable to another.
- We've applied various concepts learnt in the Georgia Tech's CSE6242 to analyze and portray the world Forest cover trends for the past 30 years.
- Our project aims to address the issue in an innovative and visual way. We worked towards:
  - Analyzing each of these factors against Forest cover data.
  - Identify the most relevant factors by ranking them by correlation score.
  - Predict future ranges for Forest land cover rate for a country / region.
  - Identify cluster of countries based on all relevant data points.
  - Creative and interactive visualization published over Public Tableau projects.

Pictures and Diagrams

Concept(s) and Working Principle(s)

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References