An Evergreen Planet: Preserving our World's Natural Forests

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Idea: Deforestation

- Forests produce essential oxygen, materials, and habitat for the survival of species on Earth.
- Between 2000 and 2012, only 2.4 million square miles of the original 6 million square miles of forest covering the Earth remain.
- Many functions of forests have no apparent economic value to their owners, and so they are quickly converted for profit.

Goals

- Raise awareness of deforestation and its alarming rates in different regions of the world
- Present viewers with important information different time periods, geographic regions, and socioeconomic levels to send message
- Discover trends to determine where to focus in order to have the most impact
- Provide a clean and elegant design

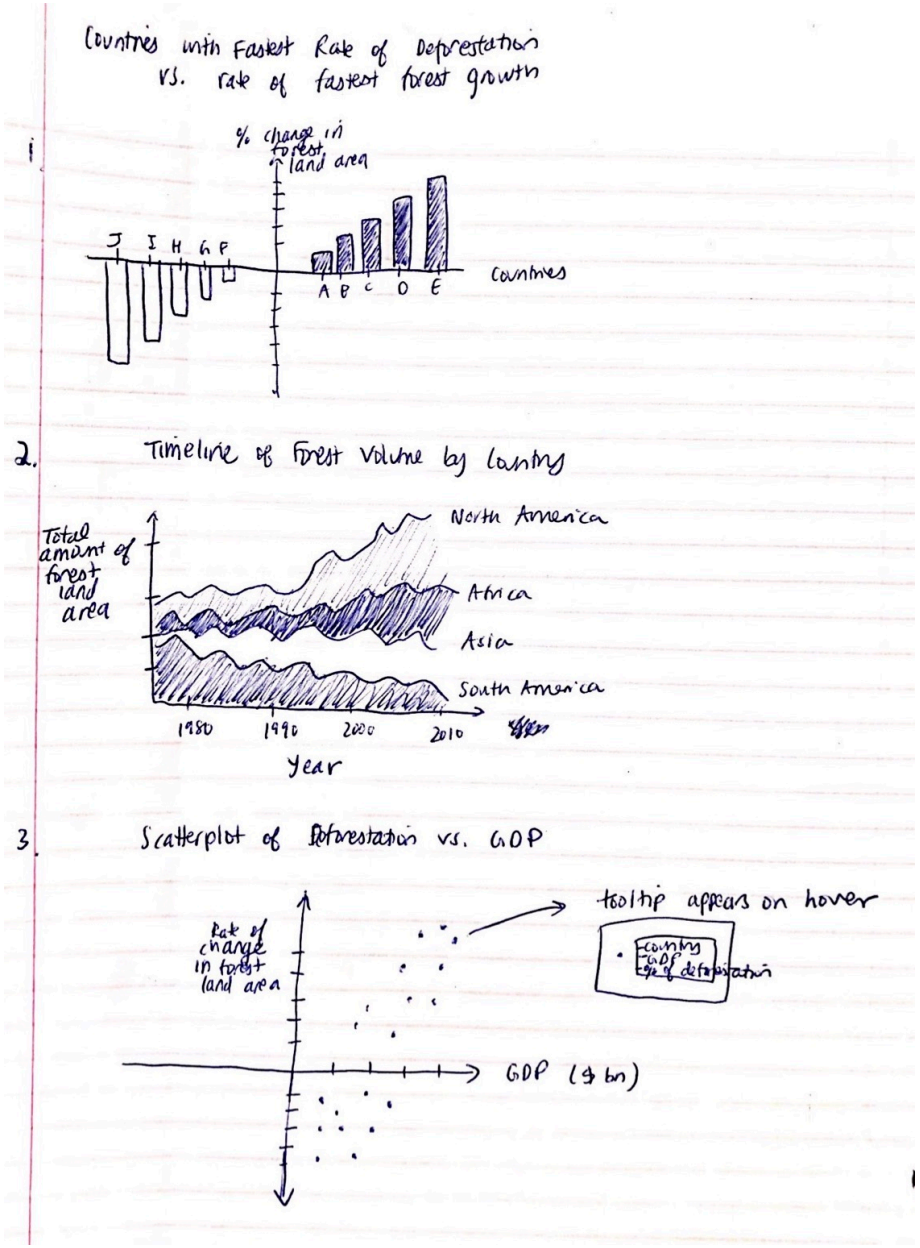
Tasks

1. Individually focus on creating own visualizations first (1 for each person)
2. Merge codes together on Github and make sure there are no compatibility issues
3. Factorize overlapping functions used in separate visualizations
4. Create website template and containers
5. Insert visualizations and text information into the already created containers
6. Stylize the website using CSS
7. Optimize efficiency of visualization generation
8. Add additional visualizations as needed
9. Fix any outstanding bugs
10. Get feedback from peers
11. Implement advice given by peers
12. Finalize website design

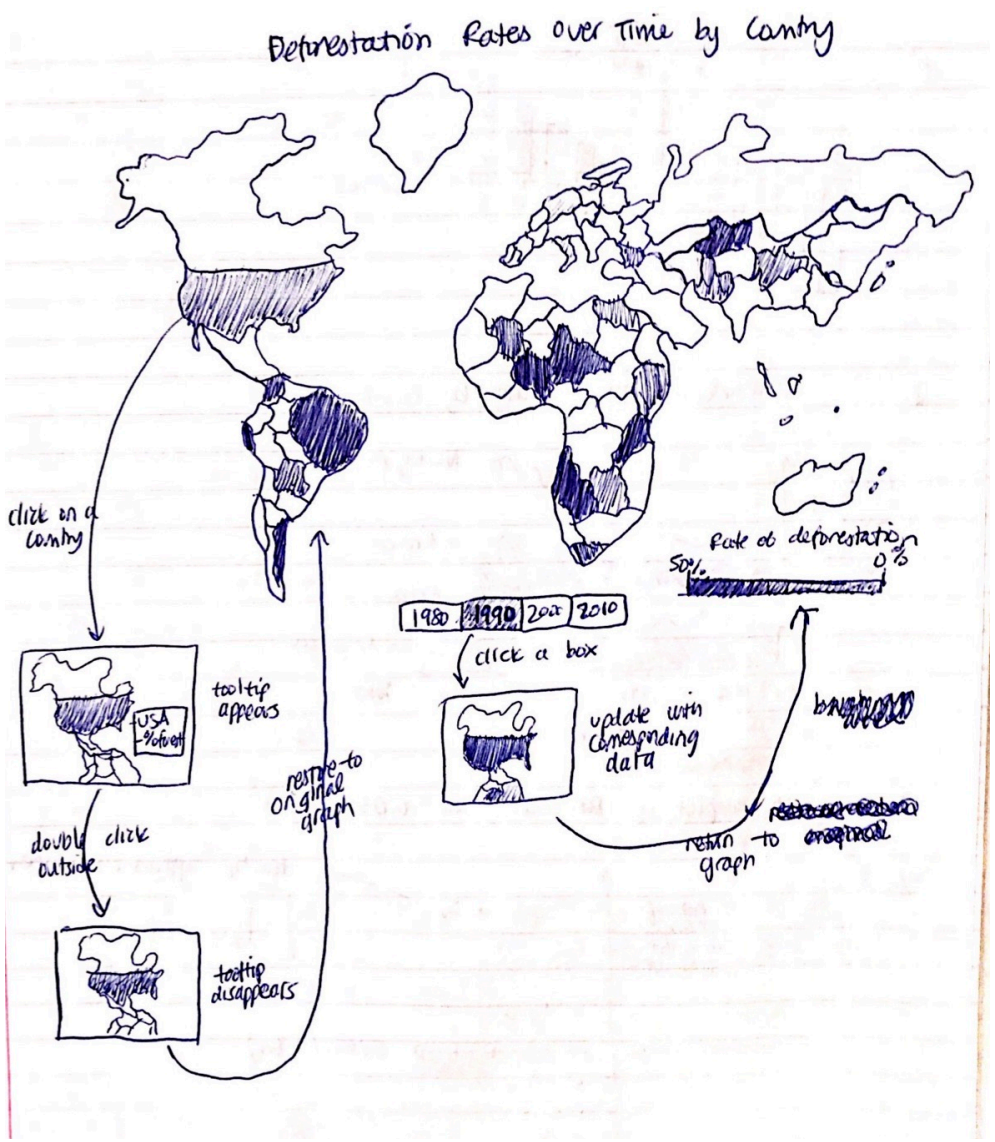
Data

- The **World Bank dataset** consists of annual data from 1990 to 2015 of the percentage of forested land broken down by countries, continents, and socioeconomic levels.
- The **Mongabay dataset** covers gross forest loss to measure the rate of deforestation.

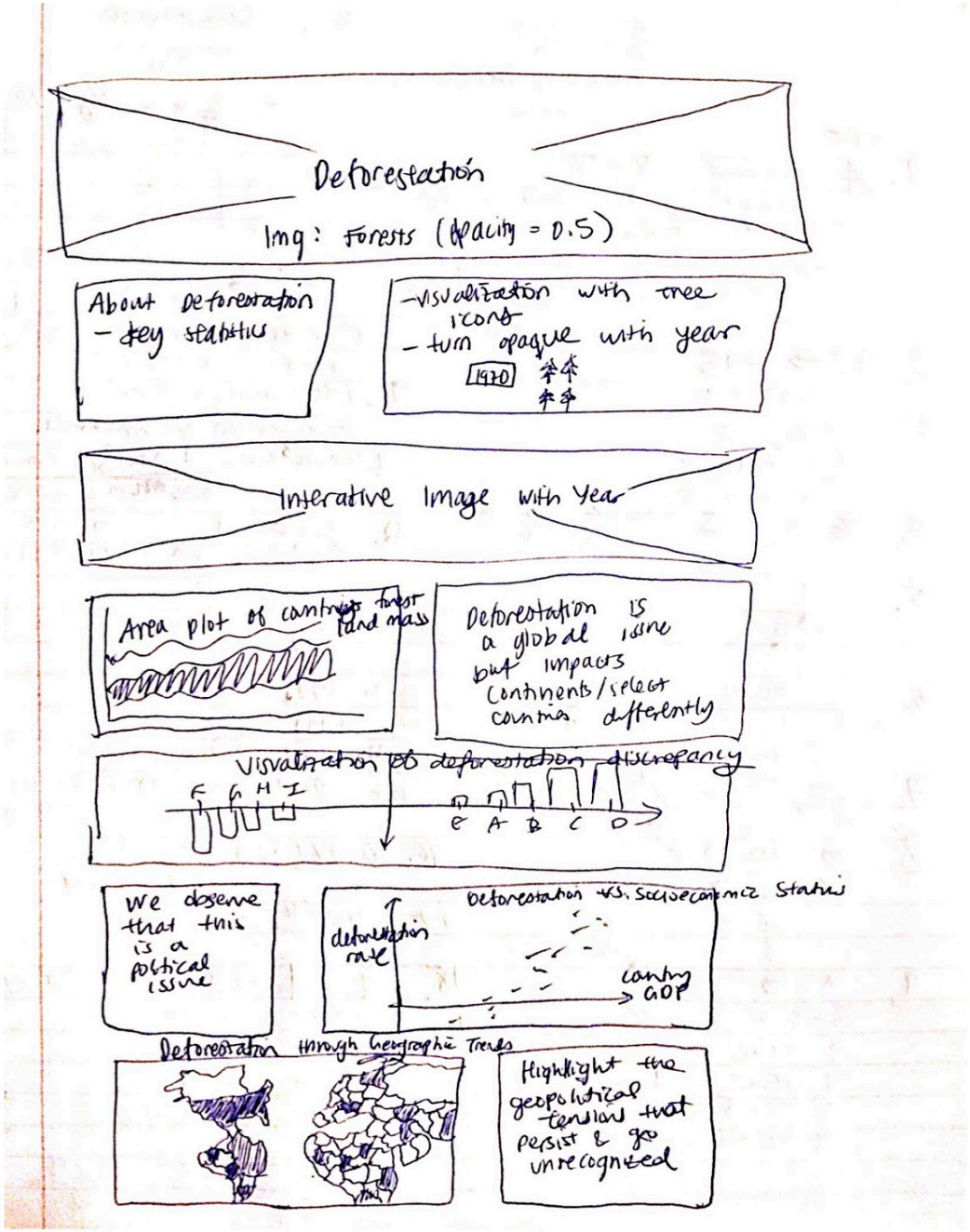
Sketch 1


Countries with Fastest Rate of Deforestation vs. rate of fastest forest growth
% change in forest land area
J I H G F
A B C D E
countries
2. Timeline of Forest Volume by country
Total amount of forest land area
North America
Africa
Asia
South America
1980 1990 2000 2010
Year
3. Scatterplot of deforestation vs. GDP
Rate of change in forest land area
tooltip appears on hover
country
GDP
rate of deforestation
GDP ($ bn)

Sketch 2


Deforestation Rates over Time by Country
click on a country
tooltip appears
USA
% of net
double click outside
tooltip disappears
resize to original graph
Rate of deforestation
50%
0%
1980
1990
2000
2010
click a box
update with corresponding data
return to original graph

Sketch 3


Deforestation
Img: Forests (opacity = 0.5)
About deforestation
- key statistics
- visualization with tree icons
- turn opaque with year
1970
Interative Image with Year
Area plot of continents forest land mass
Deforestation is a global issue but impacts continents/select countries differently
Visualization of deforestation discrepancy
F G H I
E A B C D
We observe that this is a political issue
Deforestation vs. Socioeconomic Status
deforestation rate
country GDP
Deforestation through Geographic Trends
Highlight the geopolitical tension that persist & go unrecognized