

# CS 306 Project Step 4 Report

## Repository link:

<https://github.com/tansylu/Havucclar-CS306>

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## Mobile vs. Internet Users Rate by Country and Year

This view demonstrates the ratio of mobile phone users and internet users in each country. We used a scatter plot to visualize our data and grouped the data by year. All the data in this chart is from 2020, so we can observe which countries mostly prefer using mobile phones and which prefer landline internet.

## Democracy vs Subscriptions

This view has four graphs titled *Mobile Cellular Subscriptions*, *Landline Internet Subscriptions*, *Freedom Estimate*, and *Democracy Estimate*. The first graph demonstrates the amount of mobile cellular subscriptions for the most recent year with data, for each country with a democracy estimate larger than average. We can observe a lot of variance in the bar chart. The second graph demonstrates the amount of landline internet subscriptions for the most recent year with data, for each country with a democracy estimate larger than average. We can observe a lot of variance in the bar chart as well. We cannot interpret the technological development of countries from these two graphs, as we need to compare the charts with population counts to derive correct results. The last two graphs demonstrate the freedom and democracy estimates of countries. Since the graph only includes countries with high democracy estimate, we do not observe a lot of variance in both graphs.

## Democracy vs Freedom

This view demonstrates the countries with freedom and democracy estimates higher than average, and displays the results for the latest year with data for each country. We can see some positive correlation here, as freedom and democracy are resulted by each other.

### **Stats for Highest Internet Usage for Countries**

This view has three graphs titled *Distribution of Urban Population with Electricity Access Highlighted*, *Internet Usage Trend with Max Year Highlighted*, and *Distribution of GDP Values across Countries*. The first graph demonstrates the urban populations and electricity accesses of each country in the most recent year with data in a stack chart. The second graph demonstrates the percentage of the world's population using the internet. The year 2020 is highlighted as the highest ever, since the value has overall increased over the years. The third graph demonstrates the distribution of different levels of GDP. We can observe a decline in the amount of countries as the GDP value increases.

### **Lowest Internet Usage Year**

This view demonstrates the year in which there was the lowest internet users for each country. The results are displayed on a world map/heat map. We can observe that regions that are more technologically developed have a smaller value. We can also interpret this as the year the internet arrived in each country.