

CSE 564 - Visualization Project Proposal

1. **Project Topic:** The Human Freedom Index (HFI)

2. **Group Members:**

Pulkit Dongle - 112504649

Pulkit Kalia - 112504287

3. **Dataset:**

The dataset contains approximately 1400 values and 123 attributes which defines various aspects of human freedom measured as an index.

The Human Freedom Index presents a broad measure of human freedom, understood as the absence of coercive constraint. It uses 79 distinct indicators of personal and economic freedom in the following areas:

- Rule of Law
- Security and Safety
- Movement
- Religion
- Association, Assembly, and Civil Society
- Expression and Information
- Identity and Relationships
- Size of Government
- Legal System and Property Rights
- Access to Sound Money
- Freedom to Trade Internationally
- Regulation of Credit, Labor, and Business

The HFI is the most comprehensive freedom index so far created for a globally meaningful set of countries. It covers 162 countries and ranks countries beginning in 2008.

4. **Executive summary:** We are trying to cast a light upon the personal and economic freedom of the people in different countries over the years 2008 to 2016 based on an index which captures the degree to which people are free to enjoy their rights. A central purpose of [*The Human Freedom Index*](#) is to paint a broad but reasonably accurate picture of the extent of overall freedom in the world. A larger purpose is to more carefully explore what we mean by freedom and to better understand its relationship to any number of other social and economic phenomena.

WHAT THE INDEX MEASURES ?

The HFI measures economic freedoms such as the freedom to trade or to use sound money, and it captures the degree to which people are free to enjoy the major freedoms often referred to as civil liberties—freedom of speech, religion, association, and assembly—in the countries in the survey. In addition, it includes indicators on rule of law, crime and violence, freedom of movement, and legal discrimination against same-sex relationships. It also includes nine variables pertaining to women-specific freedoms that are found in various categories of the index.

5. Statement of need:

The Human Freedom Index(HCI) presents the state of human freedom in the world based on a broad measure that encompasses personal, civil, and economic freedom. Human freedom is a social concept that recognizes the dignity of individuals and is defined here as negative liberty or the absence of coercive constraint. Because freedom is inherently valuable and plays a role in human progress, it is worth measuring carefully. The Human Freedom Index is a resource that can help to more objectively observe relationships between freedom and other social and economic phenomena, as well as the ways in which the various dimensions of freedom interact with one another.

HCI gives a good idea on how and what does a human's freedom depends on. Every government tries to increase this index so as to keep the people happy and in turn to keeps them in power. It also gives an idea as to what matters the most for the people and can also inform the government as to where they should improve to improve people's lives. The aim of this analytics is to give governments or people in general an idea as to where their country should improve or which parameter should be given more importance and which should not.

6. Project description:

The project flow will be as follows:

- Data cleaning: The collected data will be taken and checked and treated for anomaly, missing data, redundant data and inappropriate data.
- Data reduction: The data will be reduced by number of rows by either random or stratified sampling and number of columns can be reduced by either using PCA or by removing highly correlated terms(multicollinearity).
- Data exploration: The remaining data will be subjected to few data explorations like the variance of the data, skewness etc.
- Data transformation: If required, the dataset will be clustered on the number of clusters to form. For example, if we want to cluster the countries on the basis of free, semi-free or restrictive class then k-means clustering can be used with $k=3$. Also, the data should be normalized for the aforementioned algorithm.

- Data visualization: Visualizations like bar graphs, pie charts, box plots, scatter plots, maps etc to best visualize the data.

More data analysis like grouping and binning will be done on the dataset as and when required.

7. Citation:

Ian Vásquez and Tanja Porčnik, *The Human Freedom Index 2018: A Global Measurement of Personal, Civil, and Economic Freedom* (Washington: Cato Institute, Fraser Institute, and the Friedrich Naumann Foundation for Freedom, 2018)

8. References:

- I. <https://www.cato.org/human-freedom-index-new>
- II. <https://www.kaggle.com/gsutters/the-human-freedom-index>
- III. <https://www.fraserinstitute.org/studies/human-freedom-index-2018>