## **Electoral Data Analysis**

You can attempt as many questions as you want to. Partially complete assignments are also accepted.

The data attached includes the past election results at the assembly constituency level (Bihar Election Results.csv)

- a. Determine the winning party for every election at the state level. A party which has the highest total votes is considered the winner here.
- b. Determine the list of swing seats for the state. A swing seat is a constituency which has a different winner in every election. The elections are held in the order 2005-Feb, 2005-Oct, 2010 and 2015.
- c. Determine the top 8 parties at the state-level in each election in terms of getting the most votes.
- d. Determine the minimum votes that each party in the top 8 of 2015 election secured among all the past elections. Do this for all constituencies.
- e. Determine the consistently tri-polar constituencies. I.e Constituencies in which 3 parties or more got greater than 10% of the vote shares in each election. The parties can be different for different elections.
- f. Determine the stronghold party-seats. A stronghold seat is one that is won by the same party in all the elections.
- g. Determine close contest constituencies. Close contest seats are those in which the top 2 finishers had a difference of less than 10% votes. Find seats in which there was a close contest in all the elections. If there is no such seat, then relax the criteria to 15%.
- h. Find the growing seats. For the top 8 parties at the state-level in 2005-Feb Election, Determine the seats in which theses parties have continuously increased their votes in the next 3 elections.
- i. Find the declining seats. Repeat exercise g for the opposite growth.
- j. Determine the state-winner-match constituencies. Find the seats which have always elected the party that has gone on to win the state election (most votes secured at state). So if the RJD won at the state level in 2010, then seats which voted an RJD candidate as winner are considered in this category. This criteria for a seat has to be matched for each election.