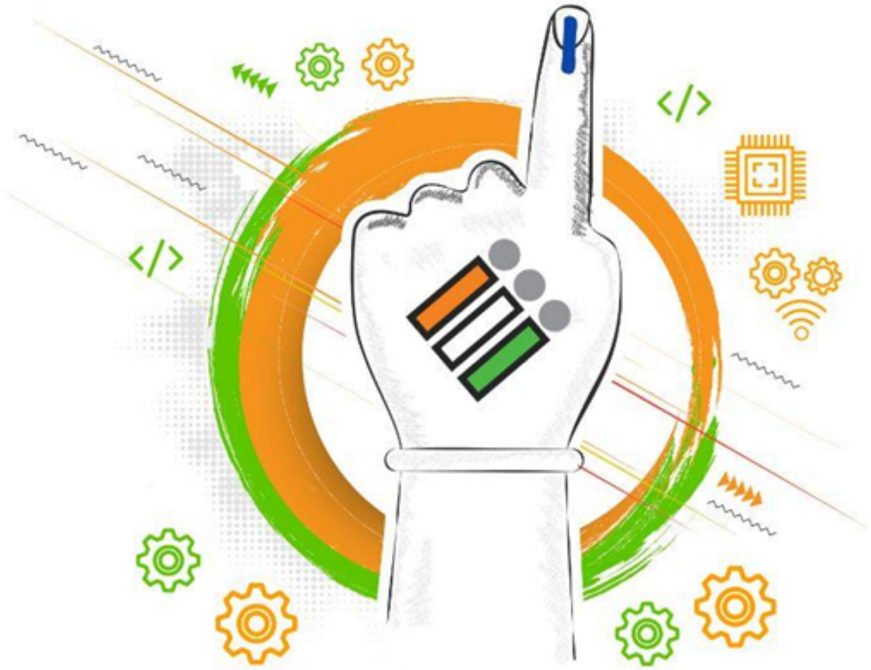


भारत निर्वाचन आयोग
Election Commission of India

ELECTHON '23

A 30 Hour Hackathon For Securing The Electoral Future

Powered By H2S

Team name:

The Psephologists

Problem Statement:

How can we increase the participation of urban and youth voters in elections to ensure their involvement in the democratic process?

Brief about the Idea: Dashboard analytics tool for tracking voters. Salient features:

1. Instagram+Twitter live region wise campaign trend tracking by posts, influencer/ECI accounts, election related keywords and hashtags.
2. Live voter turnout display using region wise heat maps at booth / constituency/ district and state level accuracy.
3. Simple infographic displays of data sorted by age/ region/ money spent for campaign/ other key metrics.

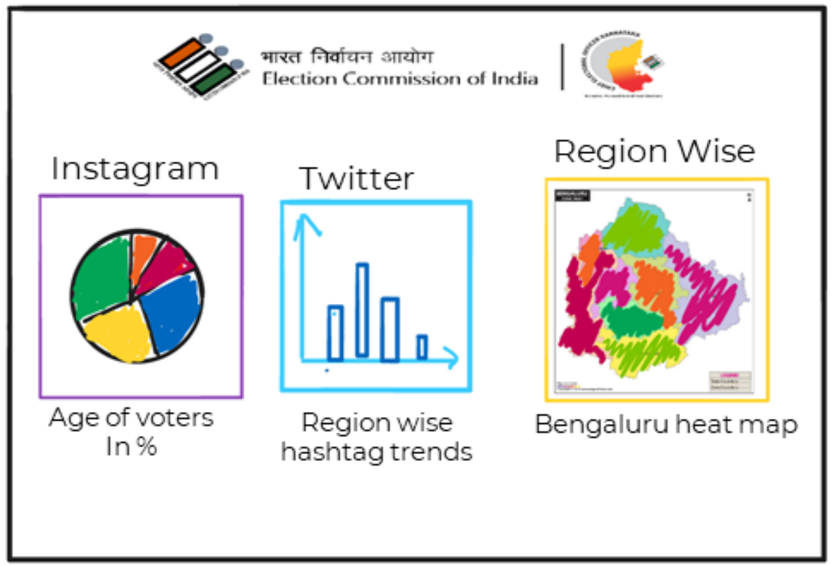
Opportunity :

- The ECI spends extensive **time** and **effort** to attract **young** voters, our solution allows them to **predict** with pinpoint accuracy the areas with **low voter turnout** and the **channels** to reach voters there.

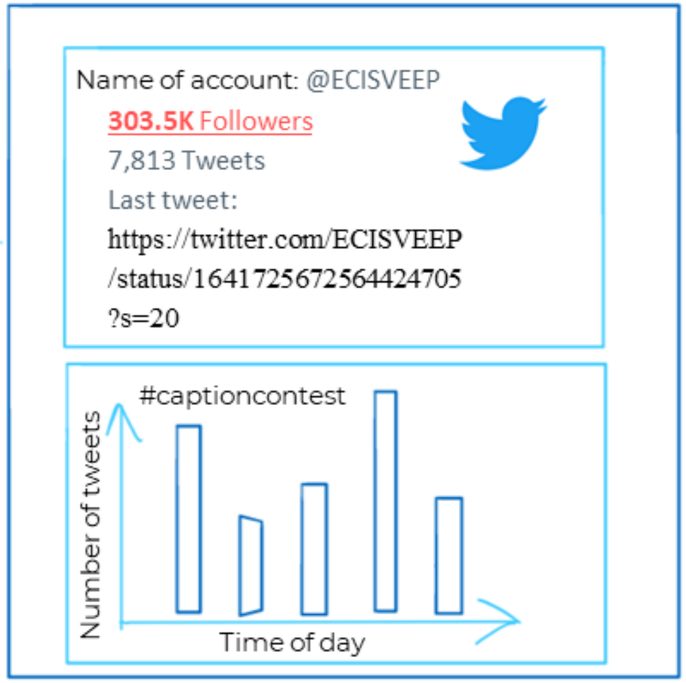
- There is **no existing one stop solution** to track social media and physical campaign **efficacy**. Also, our solution provides **live data analytics** and insights during the campaign (for social media) and during the elections (for location based insights)

List of features offered by the solution :

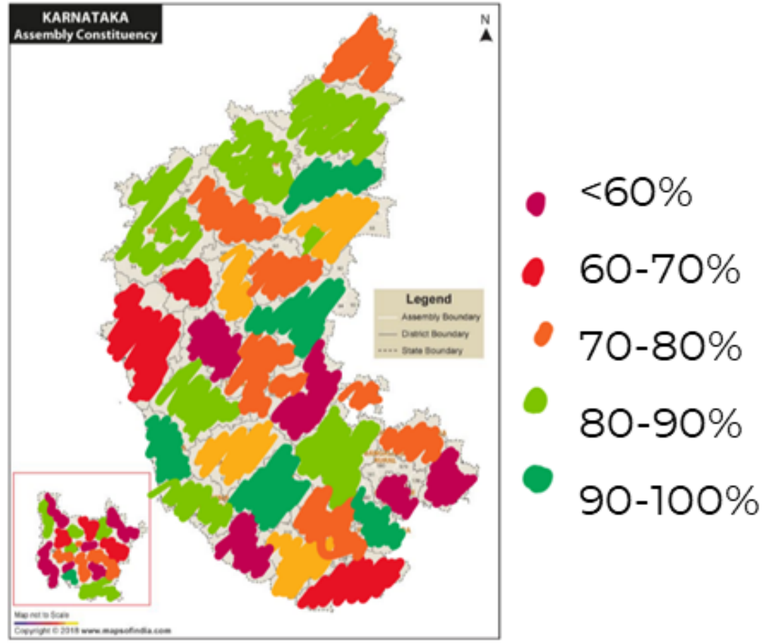
a) Dashboard Analytics



b) Social Media



c) Region wise heat maps



Karnataka voter turnout heat map

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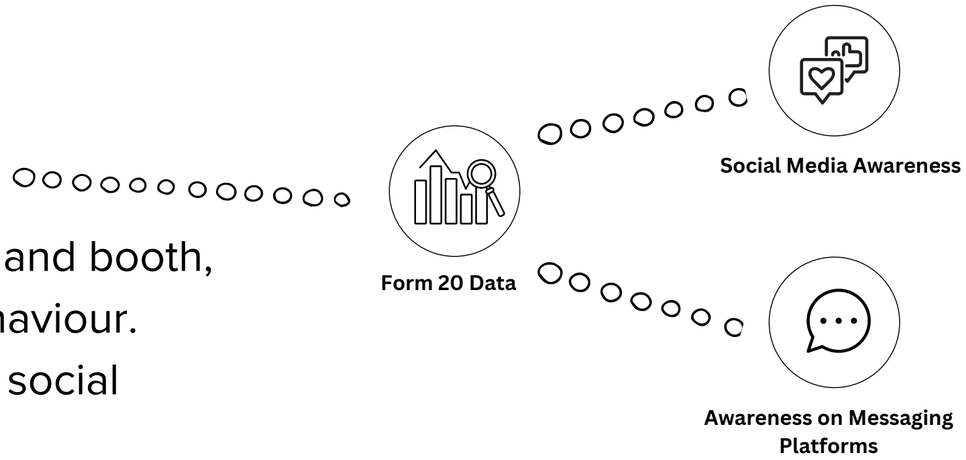
Execution

Stage 1 : PAC (Pre-Election Awareness Campaign)

Utilising data regarding voter turnout from each constituency and booth, through Form 20 of ECI website to understand the voters behaviour. Create awareness in English and regional languages through social media focusing on areas with low voter turnout.



Stage 2 : MAT (Monitor And Track)

Monitor and track content on voting awareness by influencers, campaigns led by ECI on social media. Split the data by utilising parameters like location, reach, hashtags used, etc.

Stage 3 : ACE (Awareness Campaign Execution)

Track live voter footfall and create awareness at ground level in the required areas and booths at hourly intervals.

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Process flow

Step 1

Export data from Election Commision of India website

Web scraping from Instagram/Twitter using APIs

Step 2

Analytics and pattern observation in voter turnout starting from booth level

Step 3

Insights by plotting data using relevant visualisations such as heat maps, pie-charts, bar-charts, etc.

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Technology/ Other Tools used :

1. MERN stack to create the website
2. Scraping libraries such as Selenium, beautifulsoup for data collection
3. A variety of data science libraries to analyse and understand the data such as Scikit-learn, Spacy, Keras, PyTorch...
4. Django/Flask to create a REST API for communication between the website and the backend

Estimated cost of/ after implementing the solution :

For Karnataka elections 2023: 224 constituencies

1. Hosting on Vercel for the Pro plan is $20/month which provides upto 1TB of bandwidth and unlimited function requests.
2. On-demand price for an instance on Google Cloud Platform is 0.037412/hr. Therefore the price for the 3 days in Karnataka would be 0.037412X4X24X3X45=$484.
3. Storage costs on MongoDB for Dedicated is $57/month.
4. Human capital is 50k/ month*3

Technology=50,000

Human capital=1,50,000

Total cost= 2,00,000 for a complete election

The costs are low as this is a full stack technology solution

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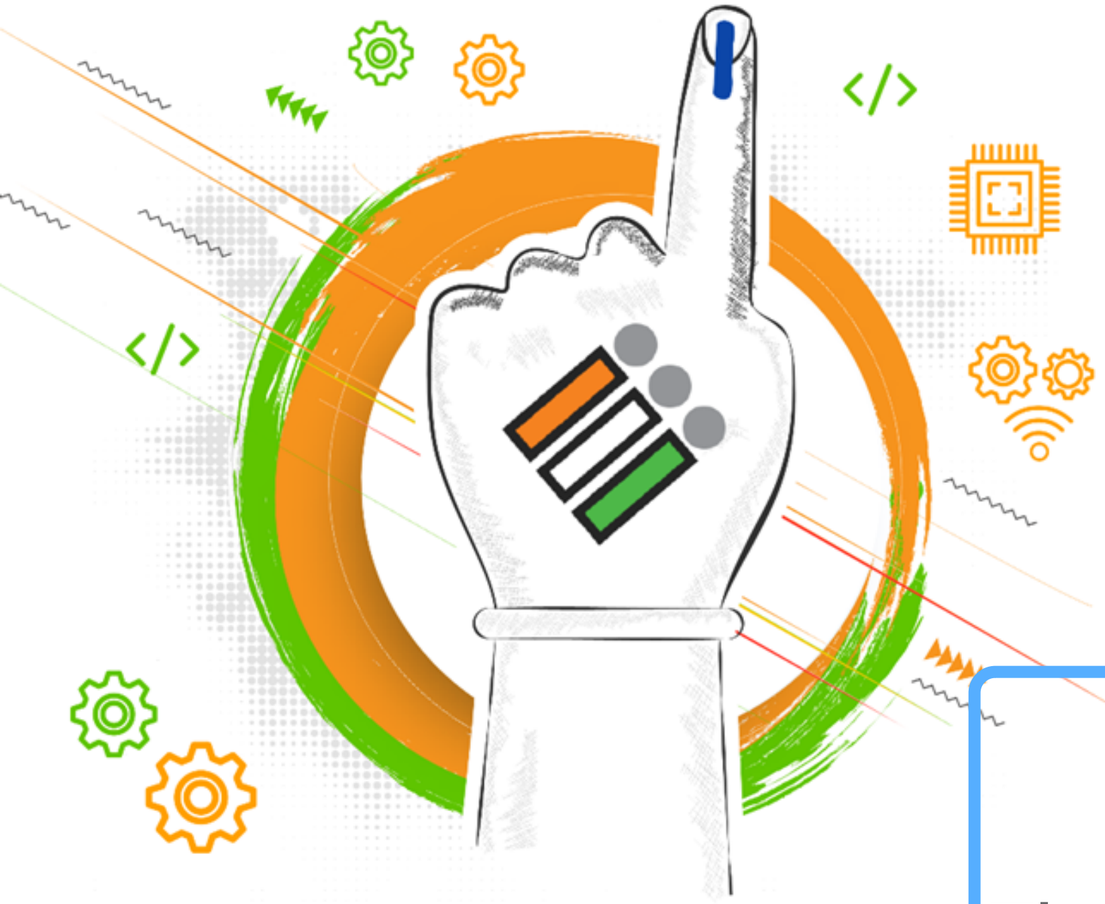

THANK YOU

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