

# IEEE NITK CHAPTER

## PROJECT – Covid Tracker

### ABSTRACT :

A website which displays plots and analytics by scraping relevant data from government data portals, to give an insight into the current state-wise pandemic situation and recovery status in India.

## PROJECT OVERVIEW

### The Motivation

For people dealing with uncertainty regarding the pandemic situation in near future, providing them with the current covid status, recovery scenario and interpolating the data to give insights into the possible situation in the next few months will prove to be helpful.

### The Opportunity

This project will help to understand the basics of web development and data analysis. One will learn different python libraries like matplotlib,pandas,beautiful soup and the steps to build a basic web page using flask.

### Project Approach

The project is divided into 4 phases, namely Learning, Frontend, Backend and Integration Phase. The workload is evenly distributed throughout a period of 4 months, and all the members will be contributing in all the domains.

### Project Deliverables

The following are the full list of deliverables which will be achieved through the entire project timeline:

Deliverable	Description
Learning	<ul style="list-style-type: none"><li>• Learning the required languages- Python,HTML,CSS,JavaScript</li><li>• Learning the required Libraries and tools : Matplotlib,Pandas,BS4,Flask etc.</li></ul>
Frontend (UI/UX)	<ul style="list-style-type: none"><li>• UX design and user flow</li></ul>
Backend	<ul style="list-style-type: none"><li>• Web scraping to collect data</li><li>• Generating analytics and plots</li></ul>
Integration	<ul style="list-style-type: none"><li>• Integrating frontend and backend</li></ul>

## Timeline for Execution

Key project dates are outlined below. Dates are best-guess estimates and are subject to change until a contract is executed.

Description	Start Date	End Date	Duration(approx)
Project Phase 1			
Milestone 1: Learning the basics of Python,HTML, CSS and JavaScript.	01 Jan 2021	15 Jan 2021	2 weeks
Milestone 2: Getting familiar with Matplotlib, Pandas, Beautiful Soup, flask etc.	16 Jan 2021	31 Jan 2021	2 weeks
Project Phase 2			
Milestone 3: UX for the website (design and user flow).	01 Feb 2021	15 Feb 2021	2 weeks
Milestone 4: Implement UI with placeholder text and images.	16 Feb 2021	28 Feb 2021	2 weeks
Project Phase 3			
Milestone 5: Script for web scraping to collect data using Beautiful Soup.	01 Mar 2021	15 Mar 2021	2 weeks
Milestone 6: Analytics using Pandas and generating plots using Matplotlib.	16 Mar 2021	31 Mar 2021	2 weeks
Project Phase 4			
Milestone 7: Create endpoints using flask to send the analytics and plots.	01 Apr 2021	15 Apr 2021	2 weeks
Milestone 8: Integrate Frontend and Backend.	16 Apr 2021	30 Apr 2021	2 weeks
Project End			

## SECTION 2 – LITERATURE REVIEW

### Libraries/Softwares to be used

Libraries/Softwares	Usage	Links
Matplotlib	Python library used for graphically visualizing data.	<a href="https://matplotlib.org/">https://matplotlib.org/</a>
Pandas	Python library used for performing data analysis.	<a href="https://pandas.pydata.org/">https://pandas.pydata.org/</a>
Beautiful Soup	Python library used for extracting data from HTML/XML files.	<a href="https://www.crummy.com/software/BeautifulSoup/bs4/doc/">https://www.crummy.com/software/BeautifulSoup/bs4/doc/</a>
Flask	It is a micro web framework written in Python	<a href="https://flask.palletsprojects.com/en/1.1.x/">https://flask.palletsprojects.com/en/1.1.x/</a>