

Terrorism Analysis and Finding Insights

(Project Internship Season - 3) (Solution Approach)



We would be going to use **Agile Methodology**.
Release Early and Release Often

This is the way i would have approached to solve a data science project
Create a Backlog—> To Do—> Doing—> Done

Create A User Story
As a User type i want a goal for some reason

Forsk would first play the Role of the PMC and help you understand the clients expectation and create Solution Approach and also Wireframes document.

Forsk would then play the Role of PG (Project Guide)
They would take daily meetings to get the status of the work.

<https://bit.ly/forskproject3drive>

Step 1 (Analysis Phase)

First step you need to do is read the document carefully and download the dataset. With the dataset is a file which explains each and every column. It is very important for any data science project to have a proper understanding of the dataset.

Read the Codebook.pdf

Deliverable of this phase would be a CSV file with reduced columns required to meet the client expectation. You should be able to read a single record and understand it.

Make a list of columns which are actually required (23 columns)

iyer || imonth || iday || country || country_txt || region || region_txt || provstate || city || latitude || longitude ||
attacktype1 || attacktype1_txt || targtype1 || targtype1_txt || natlty1 || natlty1_txt || gname || weaptype1 ||
weaptype1_txt || nkill || propextent || propextent_txt ||

Step 2 (Design Phase)

Now after understanding the client's expectation, try to create a Wireframe or rough sketch of the UI

How will the client actually use your software?

Will there be Drop down, text-boxes, buttons etc,

Also what actions would happen on the Web Page

Which Graphs/Chart should be used ?

How many pages should I design ?

This step will better consolidate the client's understanding.

Deliverable of this phase would be a Wireframe document.

Step 3 (Research and Learning Phase)

Now after understanding the client's expectation, create a list of how to.

This list will be a technical How to list.

For Example, How to Run the Script of Python from Command Line or Terminal ?

How to open the Browser from Python with a specified URL ?

How to kill the process when someone clicks the CLOSE button on the browser ?

How to fill the drop down with List of Countries/State/City etc from the Pandas in python

How to create a Map of India in python ? Dash

How to show a graph in a webpage using Python ? Dash

Google all these questions and read articles so that you now know how to technically solve that part of the problem

Step 4 (Development Phase)

Segregate the list of clients expectation into separate parts

- a) User Experience of Running the Project
- b) UI Expectation for taking input from the user
- c) UI Expectation for the output

Step 5 (Backend Development)

Create a Python script with the UI element separate to solve the core expectation from the client for Map Tool, Chart Tool. Take inputs from the user and create a custom python function which filters the required data from the dataset.

Step 6 (Frontend Development)

Now Create the UI for the clients Expectation
Then link to the UI with the backend functions created.

Step 7 (Integrated Testing)

Manual Testing in Development Environment

Manual Testing in Production Environment

Here you will feel the need for having the Logging and Exception handling.

Step 8 (Internal/Client Demo)

1 team will be selected which has the potential to go for the next phase.

The Below Steps would be for that Team which is selected by the Client/Forsk and are ready to give extra efforts and time (4 - 5 hours daily). This might require 4 weeks.

Step 9 (UAT Phase - User Acceptance Test)

In this phase the full project is given to the client and installed on the client's machine for verification of clients expectations. The client's raised points need to be fixed and resubmitted to the client again for the confirmation. This is an iterative process and might take 2-3 iterations depending on the number of points raised.

Step 10 (Packaging for Final Production Delivery)

In this phase the source code and other deliverables are submitted to the client

A project Document needs to be submitted

User Manual Document needs to be submitted with Source Code Documentation

•

Step 11 (Go Live)

Step 12 (Support and Maintenance)

Step 13 (Future Enhancements)

FAQ

**UnicodeDecodeError: 'utf-8' codec can't decode byte 0xe9 in position 18:
unexpected end of data
encoding="ISO-8859-1"**

How do you manage to get the map of india?

It's inbuilt in dash plotly

Can we use tkinter for the UI ?

Client want the solution in a Web Browser and that also locally not hosted on any of the Web Server on Internet due to privacy concerns and

getting an error after running dash code.

It is working with dash-1.13.3

2 browser tabs open when you enter the code in the cmd window?

Need to update the solution with sandeep

I don't have a teammate. What should i do ?

Either we can help you connect to another person or you can do it alone also. We would recommend having at least 1 teammate.

■

Resources to Learn for this Project

<https://towardsdatascience.com/how-to-build-a-complex-reporting-dashboard-using-dash-and-plotl-4f4257c18a7f>

<https://www.youtube.com/watch?v=Ldp3RmUxtOQ&list=PLCDERj-IUIFCaELQ2i7AwgD2M6Xvc4SIf>

<https://towardsdatascience.com/how-to-build-a-web-based-app-in-50-lines-of-code-using-plotly-and-dash-3953f039b217>

<https://youtu.be/GyMO9WCEheQ>

<https://youtu.be/Vn4y9OiJQsc>

<https://youtu.be/i4yJi-cpwWk>

<https://realpython.com/pyinstaller-python/>

<https://dash.plotly.com/installation>

<https://www.datacamp.com/community/tutorials/learn-build-dash-python>

(skip after Authentication Section)

https://www.youtube.com/watch?v=Ma8tS4p27JI&list=PLH6mU1kedUy8fCzkTTJlwsf2EnV_UvOV-&index=1

(Series of 20 videos)

<https://youtu.be/yfWJXkySfe0>

<https://youtu.be/lu0PtsMor4E>

<http://melbourne.py ladies.com/dash-app-basics/>

<https://dash.plotly.com/layout>

.