

# COMP47250: Team Software Project

PRESENTATION 2

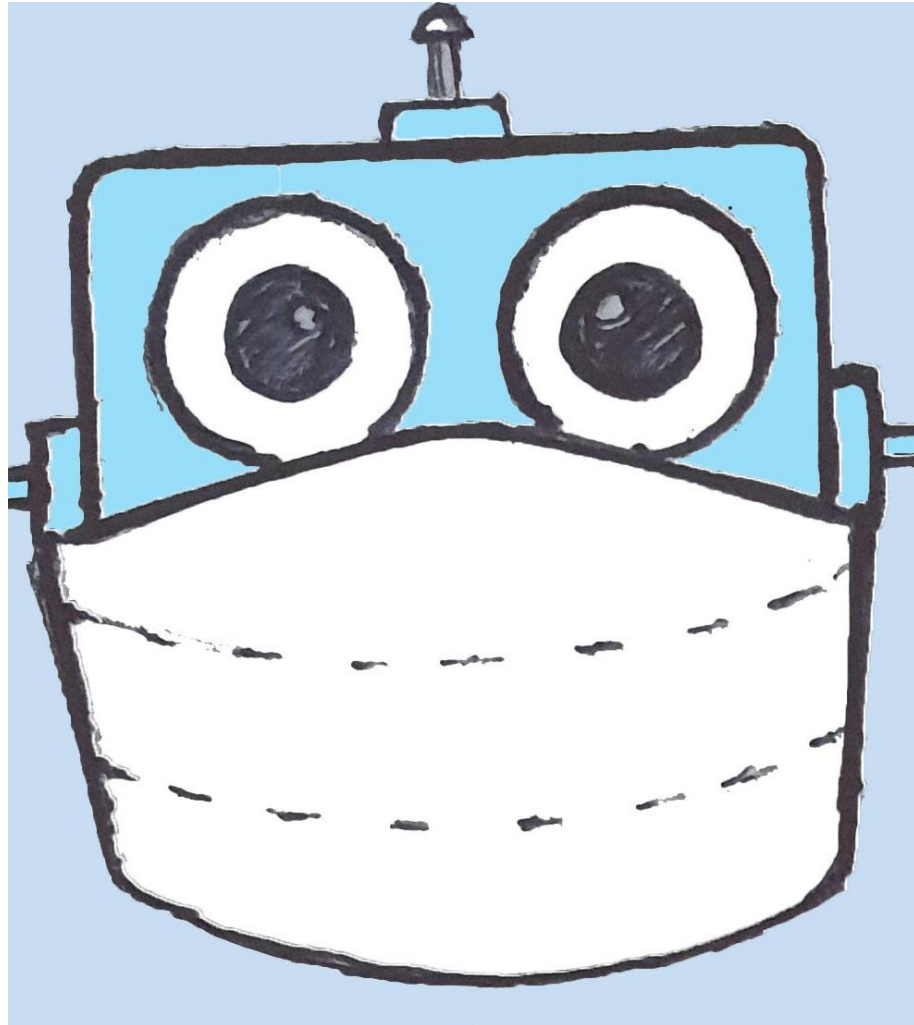
15<sup>TH</sup> JUNE, 2020



# *Team Rocket*



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# Project objectives

*Challenge 1: COVID-19*

## **COVID-19 INTERACTIVE VISUALIZER**

## AIM

Creation of a **Web-based Chatbot Application and Map Visualizer** which would enable us to solve user queries regarding the COVID-19 pandemic across the world. We aim to create more awareness among people regarding the effects of the pandemic specifically in the health sector, i.e. Infected rates, Death rates, Recovery rates, etc, by letting users directly interact with the chatbot. The web page will use trusted sources to gather relevant information in the aforementioned categories which will be used to drive the responses of the bot and power the map based visualizations of the world which will be also deployed on the same application.

We plan to achieve two paramount features

### CHATBOT

A chatbot which would answer user's queries about COVID-19.

Eg: Symptoms of COVID-19?

### INTERACTIVE MAP

An interactive map-based feature deploying visualizations that provide statistics about COVID-19 of various countries.

E.g. Total cases? Active cases?

# Project Plan

- ▶ Version 1.0 (8<sup>th</sup> June – 15<sup>th</sup> June'20)

First view of the rough front-end page of the web-page along with main statistical summarized data collected.

- ▶ Version 1.1 (16<sup>th</sup> June – 22<sup>nd</sup> June'20)

Integration of Django to the front-end and a basic implementation of the Chat-Bot. With finer implantation of previous work done.

- ▶ Version 1.2 (24<sup>th</sup> June – 1<sup>st</sup> July'20) → Milestone 1/MVP

Core implementation of the paramount tasks (House the Chat-Bot and prepare the map visualizations) before the interim presentation and subsequent preparation of the report.

- ▶ After having achieved V1.2 and the delivery of MVP , we aim to further breakdown tasks and reach goals to design a finalized sprint plan and plan the release versions accordingly.

# Roles

## ▶ **Aditya and Minaz (Front-End Team)**

Research on tools for development, color palettes, color themes, research and design logo and bot icons.  
Decide on the UI design and layout and functionality of the Webpage with the subsequent creation of Front-End.  
Integration of the Front-End with the Back-End.

## ▶ **Apurva and Vishal (Data and Visualization Team)**

Research on potential APIs required and write scripts for Data Collection.  
Data Mining and Data Cleaning/Pre-processing as and when required.  
NLP Processing for Text and research/deploy visualizations.

## ▶ **Ashwin (Cloud Deployment Team)**

Test/Deploy the required resources (Data Lake/ PostgreSQL/Data Factory/DB).  
Create dummy scripts and trigger them using data factory pipelines.  
Research on how to connect PostgreSQL to Front-end.

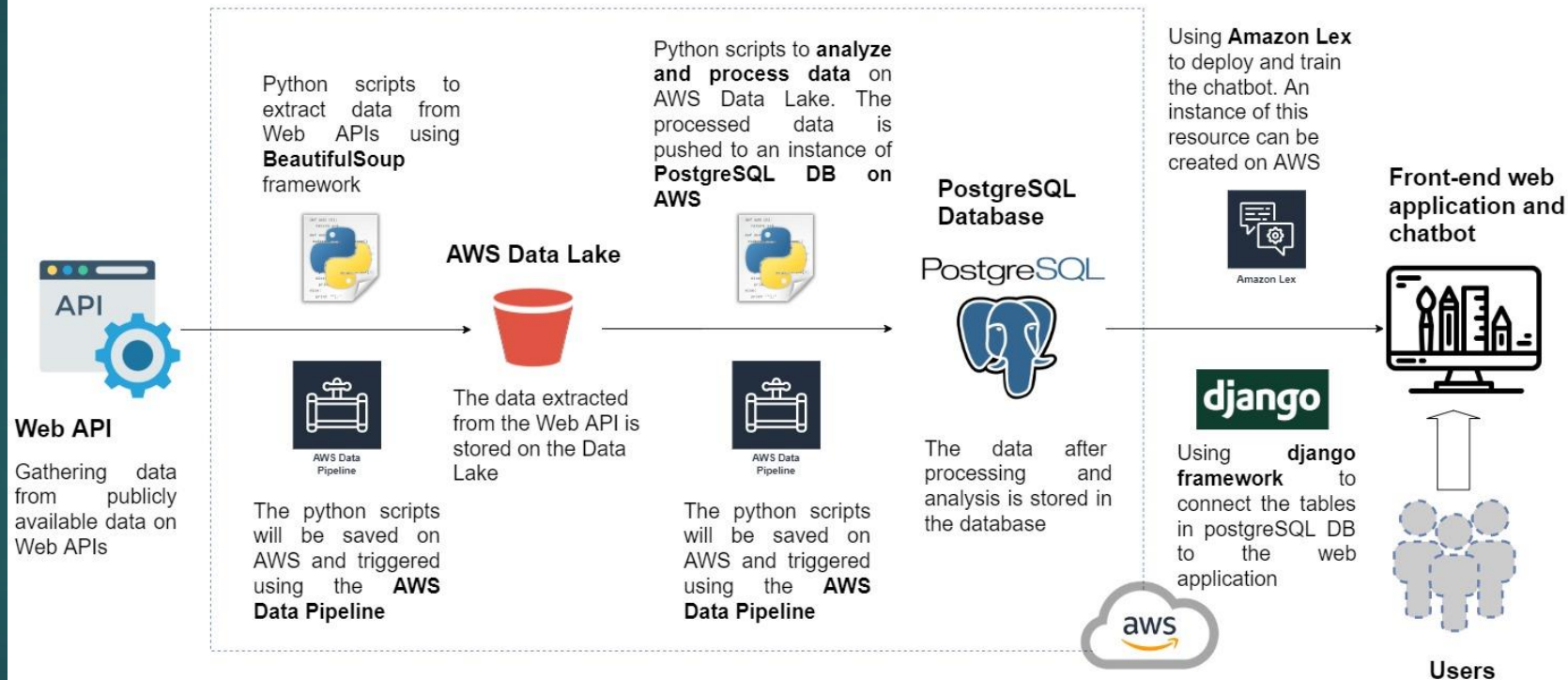
## ▶ **Sumit and Nripendra (Django Team)**

Understanding Django and identify issues for implementation.  
Analyze for the risks involved and prepare .Net Backup  
Creation of Back-End and understanding Dialogue Flow for further integration.



# Architecture

## Team Rocket - Covid-19 Project Architecture



## ▶ Data to be considered

We are considering data from various APIs; We scoured the web for COVID-19 API's or other implementations of centralized world data regarding the pandemic. We plan to consider two broad types : DYNAMIC and STATIC data. Once the data is collected and curated, we aim to filter the type of queries the bot is able to answer.

## DYNAMIC / LIVE DATA

### ▶ -Statistics of COVID-19 cases Per Country [Real Time Data, Updating regularly]

- ▶ Total cases
- ▶ Active cases
- ▶ Recovered cases
- ▶ Deceased cases
- ▶ Tests done

❖ <https://api.covid19api.com/summary>

❖ <https://api.covid19api.com/countries>

## STATIC DATA

### ▶ -Data already loaded in and doesn't need frequent updates.






- ▶ Symptoms of COVID-19?
- ▶ Healthy habits to be followed?
- ▶ Whom to contact for testing related situations (some helpline numbers)

# DATA PLAN



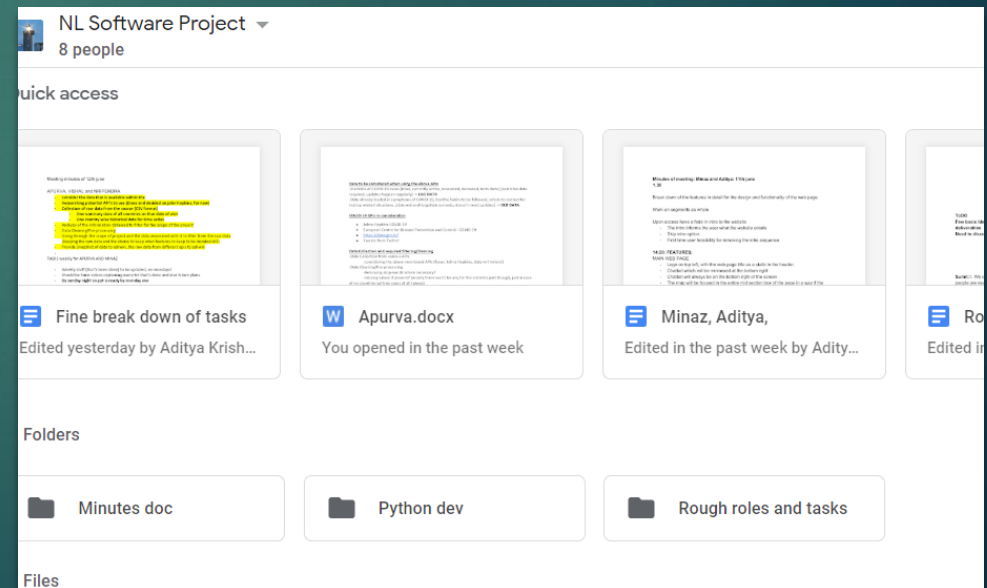
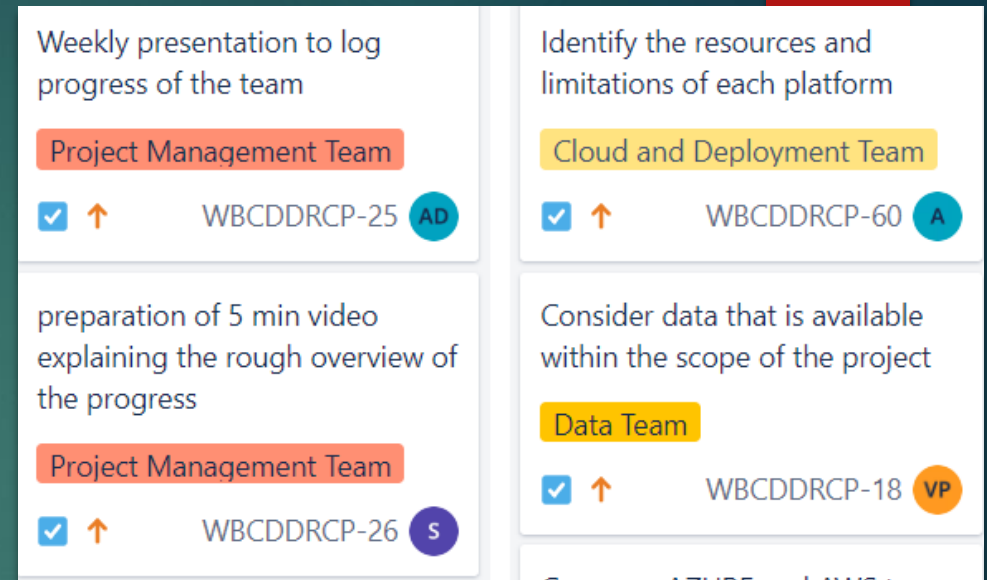
# GitHub

- ▶ Work done until now; like ideas proposed, minutes of meetings, any research done so far related to the project, has been pushed onto our team's repository.
- ▶ We've created different folders and are constantly push-committing the work as and when it is completed.
- ▶ Just to give a gist...

 Code	Update Amazon Lex.docx	8 hours ago
 EvaluationTest	Test Script	yesterday
 Minutes	Add files via upload	22 hours ago
 Presentation	Folder Updation	3 days ago
 Project Objective_Draft.docx	Add files via upload	6 days ago

# Team Management

- ❑ Team progress managed by Sumit and Aditya:
- ❑ Shared google drive folder which contains all the different folders for each team consisting of basically all of the data cumulated at one place for enhanced availability and accessibility, including the log of each MOM and documenting the progress of the team at each stage.
- ❑ Conducting daily meetings via **Google Meet** and logging MOM of each meeting
- ❑ We're using **Jira** to outline each team member's work, define sprints, plan the work to be done and the corresponding deadlines for them.
- ❑ Just to give you a gist, you can see on the right; our Jira board with tasks allocated and our shared folder on Google Drive.



# Progress So Far..

## Front-End

- ✓ Currently working on the Index page and it's contents.
- ✓ Started with CSS Framework Documentation
- ✓ Research and create bot icons and team logo.

## Data

- ✓ Research on potential API's to use (Done and decided on John Hopkinns COVID-19 API).
- ✓ Scripts written for the collection of raw data from the desired sources (CSV format).
  - One summarized data of all countries consisting of statistical data revolving around the number of cases (Active, Recovered, Deceased).
  - One country-wise historical data (Time-series).

## Test Evaluation Scripts

- ✓ Creation of a User Test Case script template and a peer review template.

## **Cloud Architecture**

- ✓ Started with the research on which platform is best suited for the project between AWS and Azure
- ✓ Creation of an Analysis document justifying why AWS is better for this use case.
- ✓ Identifying the list of resources to be used on AWS.

## **Django Framework**

- ✓ Creation of a Web Framework demo for the Chat-Bot .
- ✓ Started with the documentation analysis of Amazon LEX as a viable Chat-Bot option.

[Click to go back, hold to see history](#)

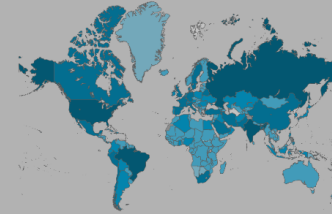
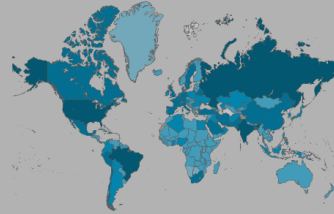
Active	City	CityCode	Confirmed	Country	CountryCode	Date	Deaths	Lat	Lon	Province	Recovered
0,,,	0			Afghanistan,,		2020-01-22	0,0,0,,	0			0
0,,,	0			Afghanistan,,		2020-01-23	0,0,0,,	0			0
0,,,	0			Afghanistan,,		2020-01-24	0,0,0,,	0			0
0,,,	0			Afghanistan,,		2020-01-25	0,0,0,,	0			0
0,,,	0			Afghanistan,,		2020-01-26	0,0,0,,	0			0
0,,,	0			Afghanistan,,		2020-01-27	0,0,0,,	0			0
0,,,	0			Afghanistan,,		2020-01-28	0,0,0,,	0			0
0,,,	0			Afghanistan,,		2020-01-29	0,0,0,,	0			0
0,,,	0			Afghanistan,,		2020-01-30	0,0,0,,	0			0
0,,,	0			Afghanistan,,		2020-01-31	0,0,0,,	0			0
0,,,	0			Afghanistan,,		2020-02-01	0,0,0,,	0			0



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0,,,0,Albania,,2020-01-23,0,0,0,,0  
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0,,,0,Albania,,2020-01-26,0,0,0,,0  
0,,,0,Albania,,2020-01-27,0,0,0,,0

B	C	D	E	F	G	H	I	J	K
Country	CountryCo	Date	NewConfirmed	NewDeaths	NewRecovered	Slug	TotalConfirmed	TotalDeaths	TotalRecovered
Afghanistan	AF	2020-06-1	748	21	313	afghanista	22890	426	3326
Albania	AL	2020-06-1	44	1	21	albania	1385	35	1001
Algeria	DZ	2020-06-1	105	9	181	algeria	10589	741	7255
Andorra	AD	2020-06-1	0	0	21	andorra	852	51	780
Angola	AO	2020-06-1	5	1	1	angola	118	5	41
Antigua and Barbuda	AG	2020-06-1	0	0	0	antigua-an	26	3	20
Argentina	AR	2020-06-1	1386	30	341	argentina	27373	765	8332
Armenia	AM	2020-06-1	566	18	240	armenia	14669	245	5466
Australia	AU	2020-06-1	4	0	23	australia	7289	102	6782
Austria	AT	2020-06-1	29	1	39	austria	17034	674	15949
Azerbaijan	AZ	2020-06-1	352	6	210	azerbaijan	8882	108	4930
Bahamas	BS	2020-06-1	0	0	1	bahamas	103	11	68
Bahrain	BH	2020-06-1	467	3	378	bahrain	16667	34	11487
Bangladesh	BD	2020-06-1	3187	37	847	bangladesl	78052	1049	16747
Barbados	BB	2020-06-1	0	0	0	barbados	96	7	83
Belarus	BY	2020-06-1	750	5	976	belarus	51816	293	26643
Belgium	BE	2020-06-1	142	7	61	belgium	59711	9636	16453
Belize	BZ	2020-06-1	0	0	0	belize	20	2	16
Benin	BJ	2020-06-1	0	0	0	benin	305	4	188
Bhutan	BT	2020-06-1	3	0	1	bhutan	62	0	19
Bolivia	BO	2020-06-1	884	21	111	bolivia	16165	533	2372
Bosnia and Herzegovina	BA	2020-06-1	57	0	37	bosnia-anc	2832	161	2100
Botswana	BW	2020-06-1	0	0	0	botswana	48	1	24
Brazil	BR	2020-06-1	30412	1239	16049	brazil	802828	40919	429965
Brunei Darussalam	BN	2020-06-1	0	0	0	brunei	141	2	138
Bulgaria	BG	2020-06-1	93	1	24	bulgaria	3086	168	1688
Burkina Faso	BF	2020-06-1	1	0	25	burkina-fa	892	53	790
Burundi	BI	2020-06-1	2	0	0	burundi	85	1	45





## GLOBALLY, AS OF 11:52AM CEST, 15 JUNE 2020, THERE HAVE BEEN 7,805,148 CONFIRMED CASES OF COVID-19, INCLUDING 431,192 DEATHS, REPORTED

Suspendisse mauris. Fusce accumsan mollis eros. Pellentesque a diam sit amet mi ullamcorper vehicula. Integer adipiscing sem. Nullam quis massa sit amet nibh viverra malesuada. Nunc sem lacus, accumsan quis, faucibus non, congue vel, arcu, erisque hendrerit tellus. Integer sagittis. Vivamus a mauris eget arcu gravida tristique. Nunc iaculis mi in ante. Lorem ipsum dolor sit amet, consectetur adipiscing elit. Aliquam vehicula bibendum nibh ut tristique. Proin vel quam non dui dictum tincidunt ac quis ex. Nullam dignissim sit amet erat tempor eleifend. Donec semper enim purus, sit amet ultricies ipsum mattis vel. Class aptent taciti sociosqu ad litora torquent per conubia nostra, per inceptos himenaeos. Nam neque leo, iaculis eu fermentum eu, tincidunt quis eros. Morbi quis nisl euismod, rutrum nibh a, commodo augue. Mauris sit amet arcu ac nisl finibus ultricies. Duis a est laoreet, laoreet tortor non, viverra ligula. In hac habitasse platea dictumst. Phasellus gravida dolor tortor, vel convallis lorem tincidunt non.

### TOTAL CONFIRMED DEATHS WORLDWIDE

#### TOTAL DEATHS

As per Crowdsourced data:

**9533**

As per MoHPW:

**9520**

Last updated on: 15 Jun - 08 PM IST

Cumsan mollis eros. Pellentesque a diam sit amet mi magna ullamcorper vehicula. Integer adipiscing sem. Nullam quis massa sit amet lorem ipsum feugiat tempus.

### TOTAL CONFIRMED RECOVERIES WORLDWIDE

#### TOTAL RECOVERED

As per Crowdsourced data:

**170935**

As per MoHPW:

**169797**

Last updated on: 15 Jun - 08 PM IST

Cumsan mollis eros. Pellentesque a diam sit amet mi magna ullamcorper vehicula. Integer adipiscing sem. Nullam quis massa sit amet lorem ipsum feugiat tempus.

STAY SAFE!

THANK YOU!

-Team Rocket