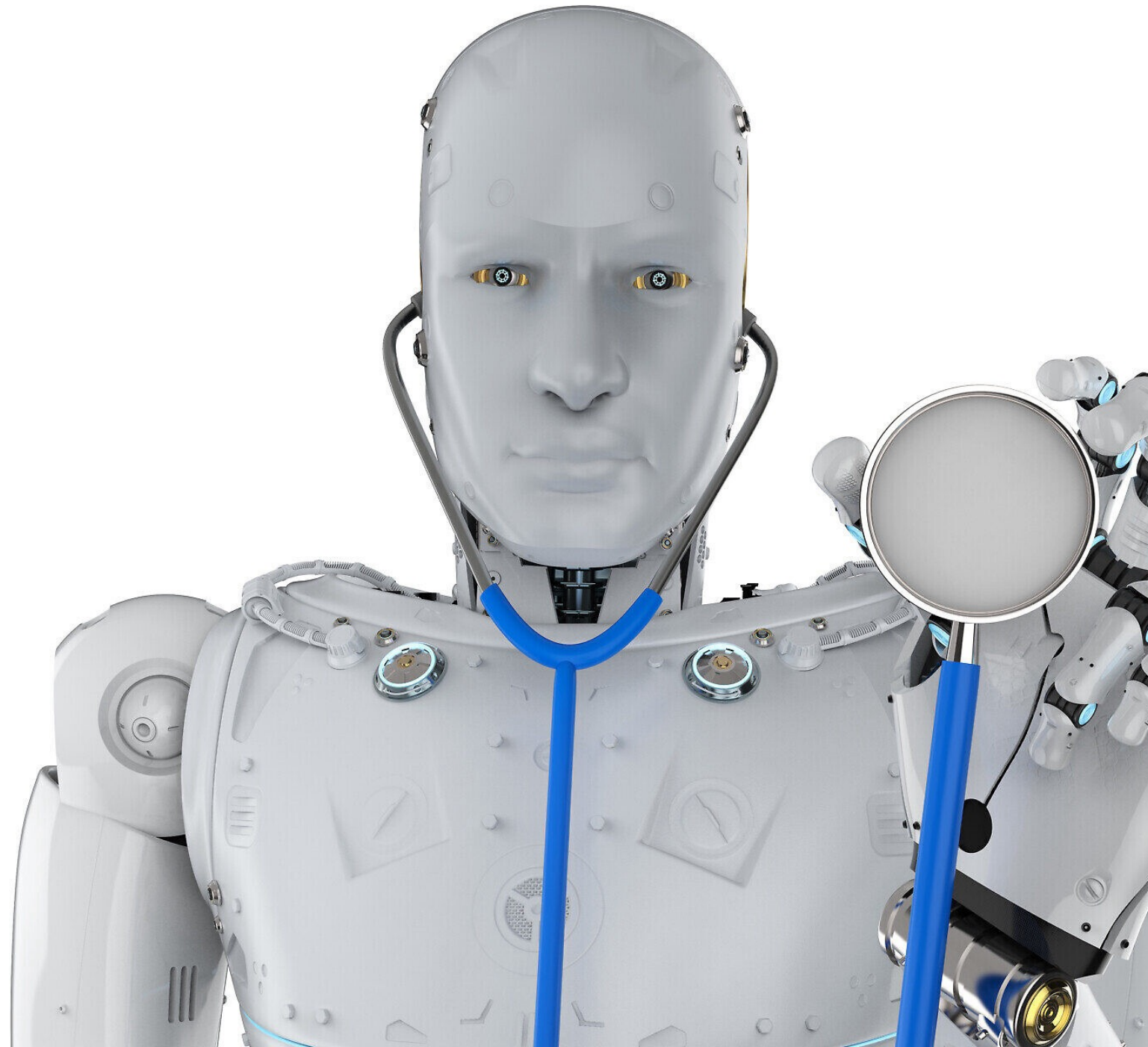

DOCTOR. AI

YOUR INTELLIGENT MEDICATION GUIDE

- Sujatha Alagarsamy
- Andy Metz
- Younes Smyej
- Anitha Pandian
- Briana Liu



PROBLEM STATEMENT



MANY INDIVIDUALS FACE CHALLENGES WHEN TRYING TO FIND ACCURATE INFORMATION ABOUT MEDICATION FOR THEIR HEALTH CONCERNS.



RELIABLE AND TRUSTWORTHY SOURCES OF INFORMATION CAN BE DIFFICULT TO NAVIGATE, LEADING TO CONFUSION AND POTENTIALLY INCORRECT SELF-DIAGNOSIS



COMMON SEARCH ENGINES OFTEN PROVIDE OVERWHELMING AND INCONSISTENT RESULTS, MAKING IT CHALLENGING TO FIND RELIABLE AND UP-TO-DATE INFORMATION



THE NEED FOR A USER-FRIENDLY AND RELIABLE SOLUTION THAT EMPOWERS INDIVIDUALS TO ACCESS ACCURATE AND UP-TO-DATE INFORMATION ABOUT MEDICATION IS EVIDENT.



MAIN QUESTIONS?

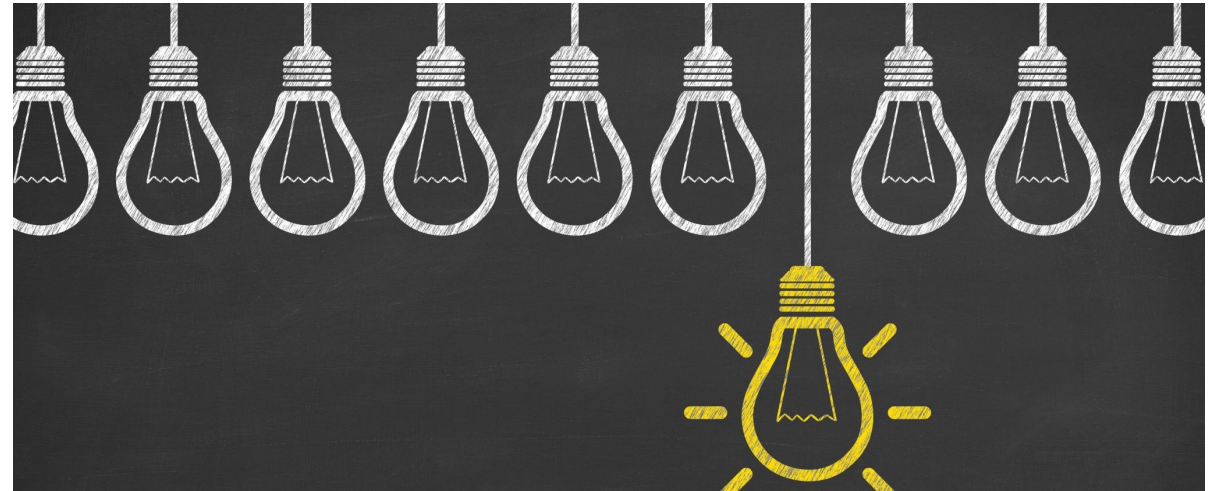
- Is this medication available over the counter?
 - What kind of active ingredients and strength does this medication have?
 - In what form(s) is the medication available?
 - Is it safe to use for a specific purpose?
-

DATA SOURCE SEARCH



AND

BRAINSTORMING IDEAS



**Reliable
data
source?**

open.fda.gov

**Audience
Interest?**

Medication marketing status and drug label
information

**How to
achieve
it?**

Direct API Calls

Store in mongo DB and use Flask API Call to UI

LIMITATIONS



We limited the API call to 300 records



Medical disclaimer – FDA Disclaimer on the webpage



This cannot be executed as a web application, only as a local host page.

Disclaimer

Do not rely on openFDA to make decisions regarding medical care. Always speak to your health provider about the risks and benefits of FDA-regulated products. We may limit or otherwise restrict your access to the API in line with our [Terms of Service](#)

This warning banner provides privacy and security notices consistent with applicable federal laws, directives, and other federal guidance for accessing this Government system, which includes all devices/storage media attached to this system. This system is provided for Government-authorized use only. Unauthorized or improper use of this system is prohibited and may result in disciplinary action and/or civil and criminal penalties. At any time, and for any lawful Government purpose, the government may monitor, record, and audit your system usage and/or intercept, search and seize any communication or data transiting or stored on this system. Therefore, you have no reasonable expectation of privacy. Any communication or data transiting or stored on this system may be disclosed or used for any lawful Government purpose.

DISCLAIMER FROM FDA

DESIGN GOAL

- Dr. AI offers a comprehensive solution to the challenges faced by individuals when seeking accurate information about medication.
- Dr. AI provides a user-friendly webpage with options to choose Over the counter or Prescription or Discontinued and view results with seamless experience for users.



TECHNOLOGY DECISION



Python Flask API



MongoDB



Vue JS
Plotly.js



BootstrapVue
CSS library
framework



HTML

DATABASE DESIGN

Mongo DB

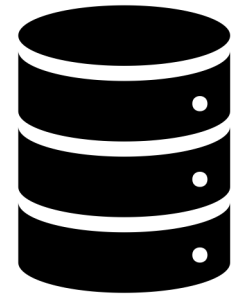
Drugs API returns limited response count.

To avoid biased response and get quality dataset API is hit 3 times with each category and stored in 3 different collections

Database Name: DrugsDatabase

- fda_dis_drugs - stores discounted records
- fda_otc_drugs - stores over the counter drugs
- fda_rx_drugs - stores prescription drugs

Limitation – the query is limited to get 100 records per each category. Total of 300 records will be stored and used for this project.





UI DESIGN ELEMENTS

- **Option Button** to choose medication type
 - **Table** that display Medication name, dosage form, Intake route and active Ingredients/strength
 - **Filter and sort** the displayed records
 - **Pie-Chart view** that displays medication count by dosage form
 - **Bar-Chart view** that displays medication count by Intake route
-

UI ADDITIONAL FEATURE



Refresh Data on page load



Refresh data using button



More details view from direct
API call using same data

Choose the Medication Type :

Over-the-counter

Prescription

Discontinued

Refresh data again? click Me

Sort By

-- none --

Asc

Filter

Type to Search

Clear

Medication (Click to sort ascending)	Dosage Form (Click to sort ascending)	Intake Route (Click to sort ascending)	Active Ingredients/Strength (Click to sort ascending)	Additional Info
MILRINONE LACTATE	INJECTABLE	INJECTION	MILRINONE LACTATE - EQ 1MG BASE/ML	More Details
AEROLONE	SOLUTION	INHALATION	ISOPROTERENOL HYDROCHLORIDE - 0.25%	More Details
MPI STANNOUS DIPHOSPHONATE	INJECTABLE	INJECTION	TECHNETIUM TC-99M ETIDRONATE KIT - N/A	More Details
OFLOXACIN	SOLUTION/DROPS	OPHTHALMIC	OFLOXACIN - 0.3%	More Details
FINASTERIDE	TABLET	ORAL	FINASTERIDE - 5MG	More Details

Display 5 records per page

First

Prev

1

2

3

4

...

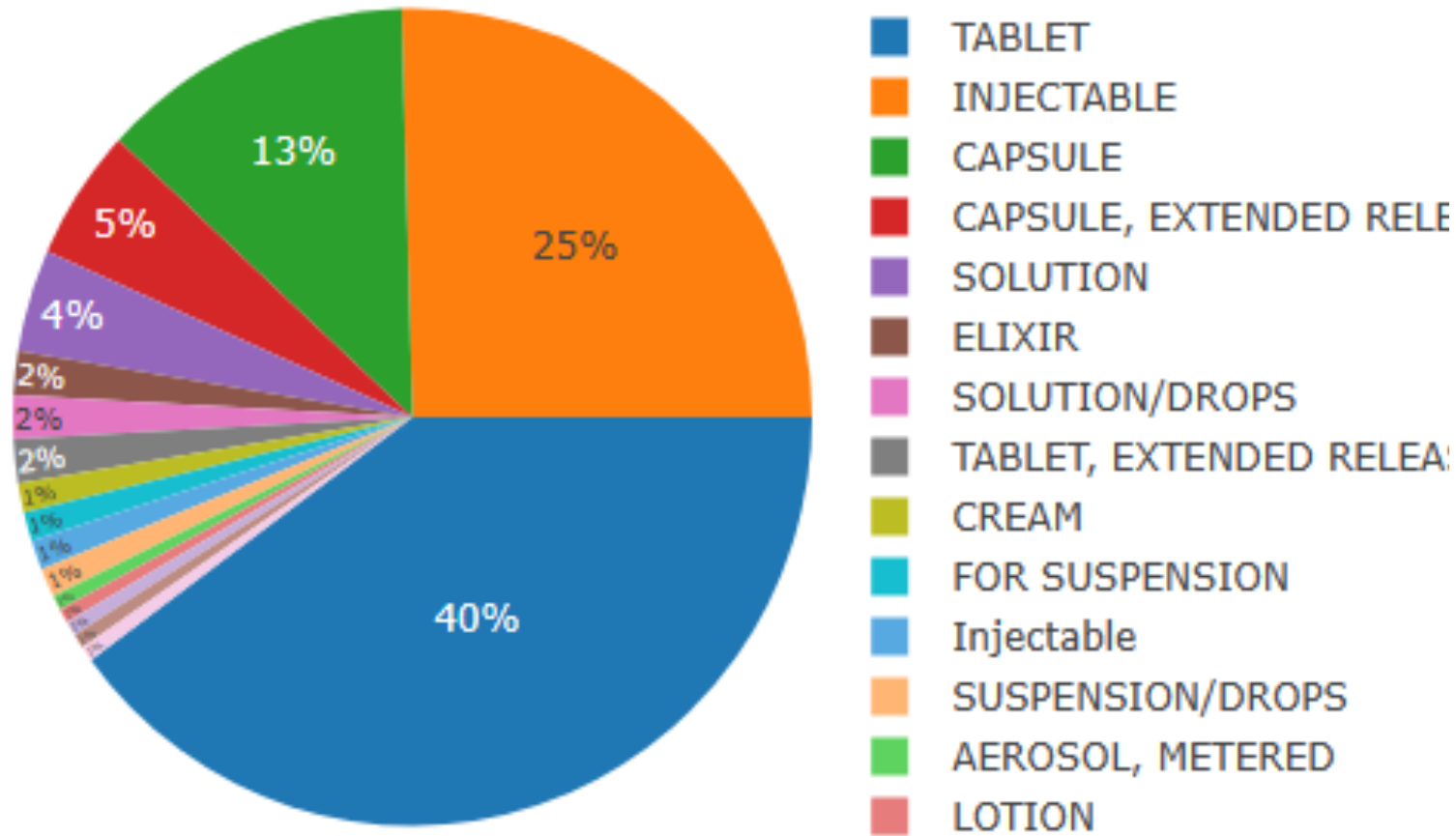
Next

Last

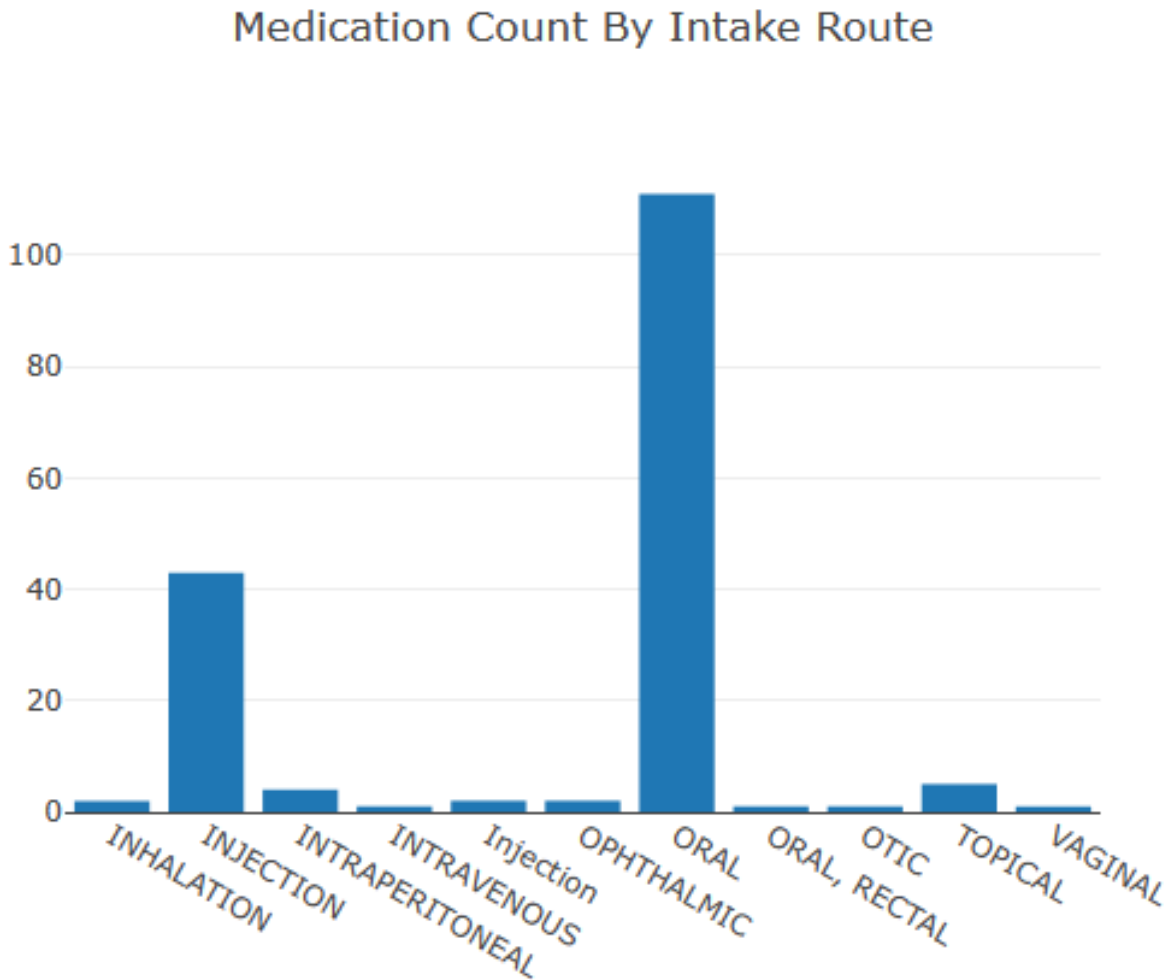
TABLE VIEW

Medication Count By Dosage Form

PIE CHART

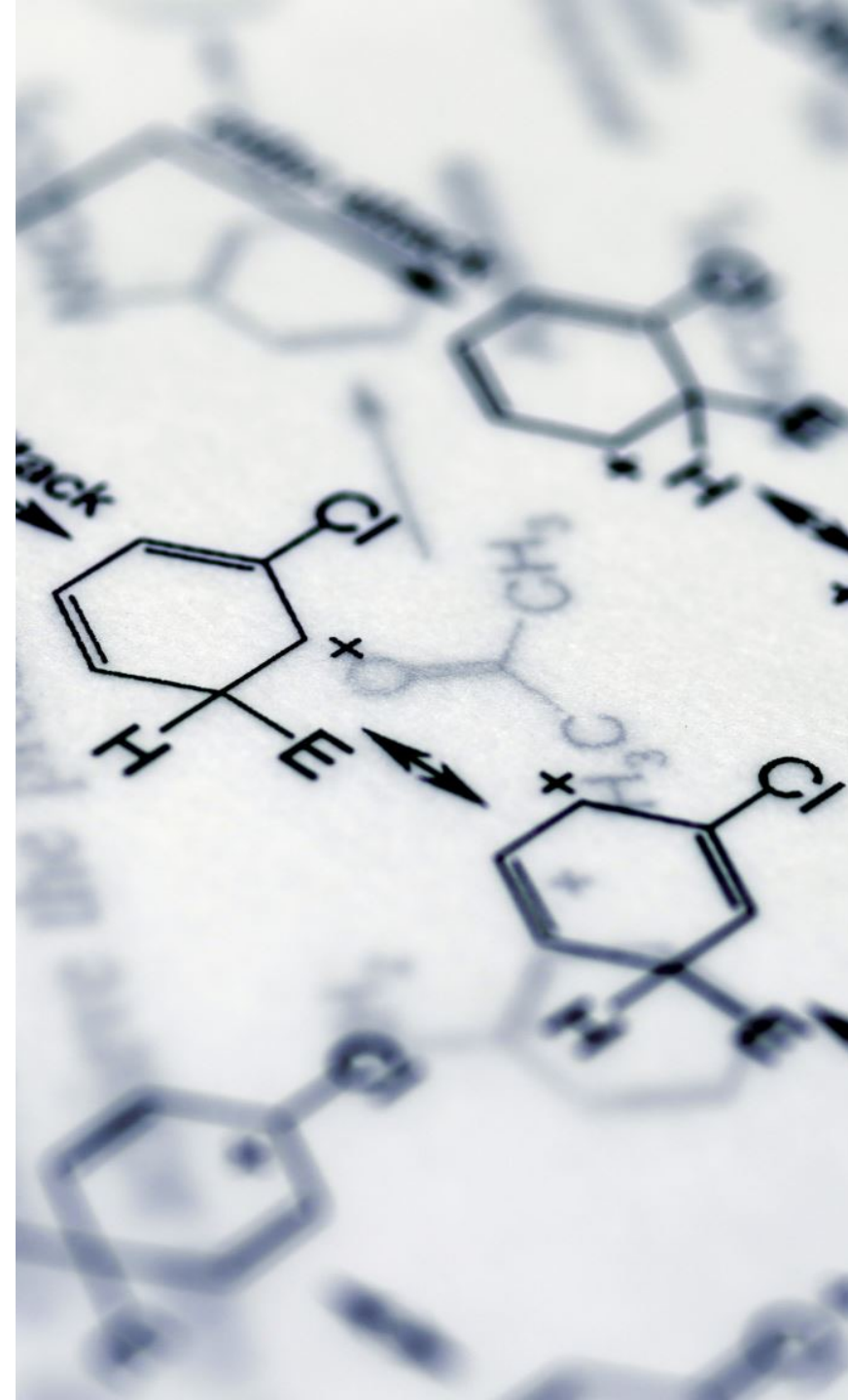


BAR CHART

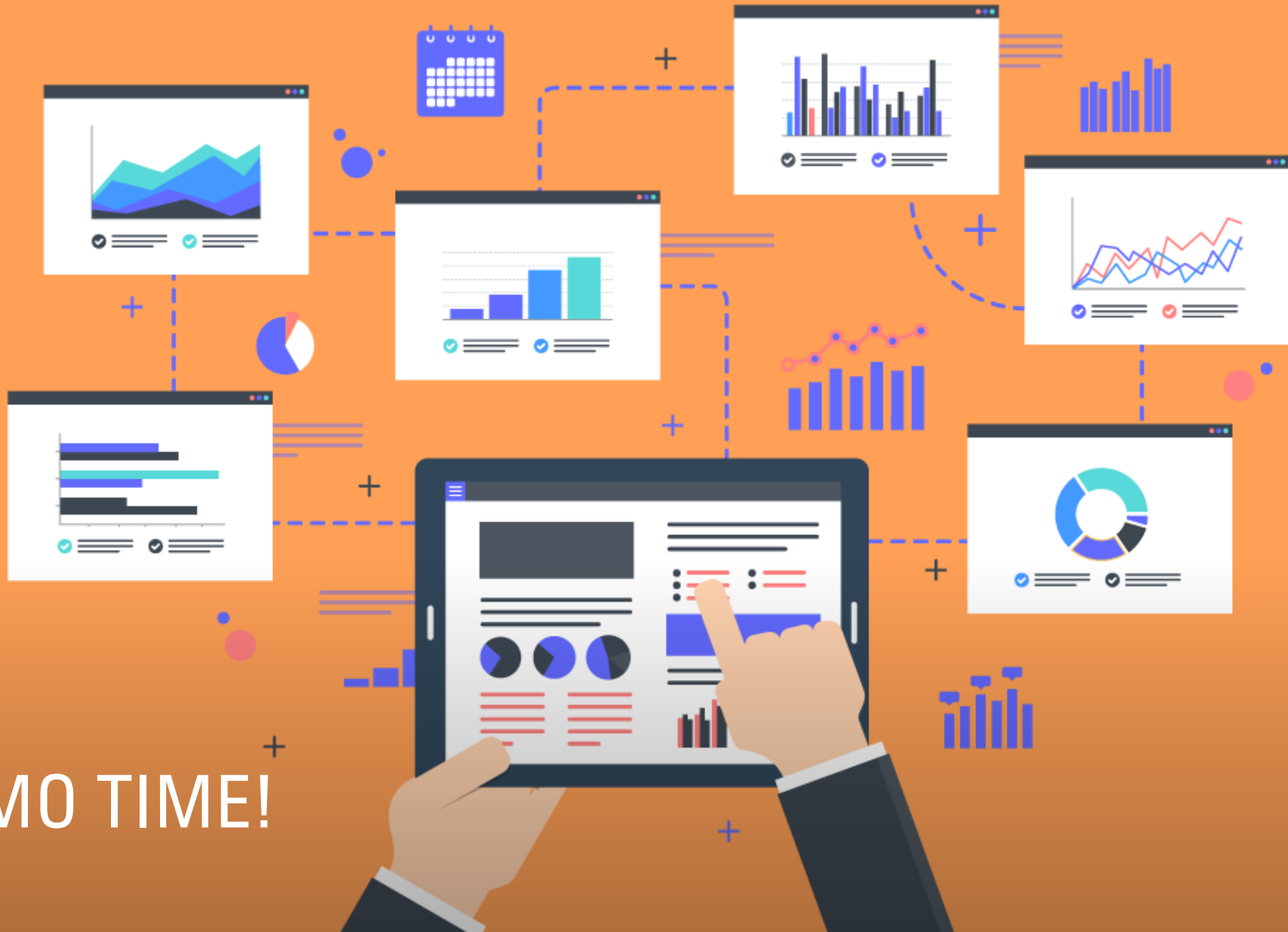


FLASK API CALLS

- API Calls:
 - `'/refresh_data'`
 - `'/getMedicationByType/<medication_type>'`
 - `'/getCountByCategory/<medication_type>/<category_type>'`
 - `'/getMoreDetailsFromFDA/<brand_name>'`



DEMO TIME!



QUESTIONS?

THANK YOU!!!

