All the files are ipynb files, which can be easily run directly. All you need to do is change the path according to the main folder. All the work has been categorised into sections/subsections for ease of access.

I have done most of the work in colab. This is the drive link: <https://drive.google.com/drive/folders/1215z9FrydK8Qn9wM2u3e8l427S1mzvw4?usp=sharing>

The codebase folder contains all the ipynb files-

The main files are gemini.ipynb and openai.ipynb

They both contain the prompts I ran for all the steps(baselines and neurosymbolic)

* Direct and CoT prompting
* Few shot
* API extraction
* Neurosymbolic generation

There are two other ipynb files for auto eval using gemini and openai titled: gemini\_rule\_based\_checking and openai\_rule\_based\_checking

api\_doc\_extraction.ipynb extracts documentation for the selected APIs/libraries list

few\_shot\_prompt\_creation creates the prompt for the few shot baseline

The Dataset folder contains the list of tasks finally decided and the few shot examples that have also been selected manually. Initially the data and datagen folders were created to look at the type of data that could be scraped and used, but eventually the tasks were manually picked and aligned due to lack of diversity.

The CSV folder contains all the essential csv files:

[**Prompts-step2**: prompts.csv](https://drive.google.com/open?id=1rQTX8pM1M48y_pXnwzKwMHQ-wqWITPSQ&usp=drive_copy) : Contains direct and cot prompts

[**Few\_shot\_prompts.csv**](https://drive.google.com/open?id=1V7V5n6lIv5PLy3_qEoTcG6LWR0RXjl13&usp=drive_copy): Few shot prompts

[**Api\_documentation\_new.csv**](https://drive.google.com/open?id=1KDrjOZCc2mS_p2nHyujjYou20e5Fivg7&usp=drive_copy): Api documentation followed by responses of gpt and gemini’s extracted version

[**Neural\_results\_gpt.csv**](https://drive.google.com/open?id=1LvQkZhkXEgJ1mnBOD4G7XbGzd0VTa0Ke&usp=drive_copy): Neural suggestion results gpt

[**Neural\_results\_gemini.csv**](https://drive.google.com/open?id=1HQJoqxU0XeQv6pl88u6bfq-gu-20izQD&usp=drive_copy): Neural suggestion results gemini

[**Symbolic\_gpt.csv**](https://drive.google.com/open?id=1kJQ5oXVQ9wVFnXQlu-cE5RP-UGMM4pp2&usp=drive_copy): Symbolic checking suggestion gpt(Rules to be looked into)

[**Symbolic\_gemini.csv**](https://drive.google.com/open?id=1IztlKDRLp_nNLtTvfBNzSHGqW7tj_siY&usp=drive_copy): Symbolic checking suggestion gemini(Rules to be looked into)

[**Check\_gemini.csv**](https://drive.google.com/open?id=1sShcsi-JKJZoPpiMKWV_aRJwWewMk12g&usp=drive_copy): Output for GPT after symbolic checking

[**Check\_gpt.csv**](https://drive.google.com/open?id=1AlkTPA99daAy1d8F2luhE2z8_2rKf3Xi&usp=drive_copy): Output for Gemini after symbolic checking

[**Final\_generated\_code\_gemini.csv**](https://drive.google.com/open?id=1ueBteu9wGXBVv0N8fWPu_CbNnD2fRyWl&usp=drive_copy): Final generated code gemini

[**Final\_generated\_code\_gpt.csv**](https://drive.google.com/open?id=1LBUF1uk8WaiHH3XmZKYbUXaDjwj0lXvo&usp=drive_copy): Final generated code gpt

[**Step2-responses.csv**](https://drive.google.com/open?id=1gmgeo3h_mUyiyDlTfeurdVpw_aIPmf6w&usp=drive_copy)**:** Responses all put together for step2 (Responses of baselines like direct, cot, few shot and neurosymbolic synthesis)

The evaluation folder contains a code folder and some excel sheets for evaluation and score compilation.

Code: Runtime files for all the cases : GPT+Gemini(Few shot,CoT,Direct) = 2\*3 = 6

GPT+Gemini (Neurosymbolic) = 2

Code\_quality: To check quality of code

Compilation\_success\_rate: To check compilation and syntax quality

Extract\_code\_snippets: To extract code from the response

[**code\_quality&runtime\_check**](https://drive.google.com/open?id=1tDEe0I8JBt8dDW6eNF89yBv7_KXgnnDE1mIL55Z0Yzs&usp=drive_copy)**:** Final compiled values for code quality and runtime check

[**Generalization**](https://drive.google.com/open?id=1Zv6gmaeH5UW93a5xenYAb26PaG1kOnvvyVTxUZ5GV10&usp=drive_copy)**:** generalization test cases

[**Eval**](https://drive.google.com/open?id=1l-Dmb7RYLmAYCu0EgjOBbjMKXEqosWrRIJQGt-WFCrI&usp=drive_copy)**:** contains evaluation details

[**Final\_code\_gpt**](https://drive.google.com/open?id=1jwXY3WPBi87GkiMdECIMqjyy-ookamVlRsLK-4vkgzw&usp=drive_copy)**:** final clean code for gpt

[**Final\_code\_gpt.csv**](https://drive.google.com/open?id=1jIm5AGQcuxpnhhFhx3eKjqxmjqGTqnC_&usp=drive_copy)**:** final clean code for gpt

[**Final\_code\_gemini.csv**](https://drive.google.com/open?id=1z0Dk1DLp72fvXSY0VRveG1vXZs6-e1jd&usp=drive_copy)**:** final clean code for gemini

The excel and google sheets folder contains the excel version of csv. Details remain the same.