Kharagpur Winter of Code 2021

PROJECT REPORT

9th January 2022

Kharagpur Winter of Code is a month-long event run by Kharagpur Open-Source Society, for beginners and students new to Open-source development.

Project Selection

I am a first year UG student at IIT Kharagpur, and I was looking for a python-based project in KWOC 2021. The project which I found interesting was Chat Analyser by Mr. Ravi Jain (GitHub-@JRavi2). This project analyses WhatsApp, Signal and Telegram chats and generated a detailed report based on activity of users.

Project Contributions

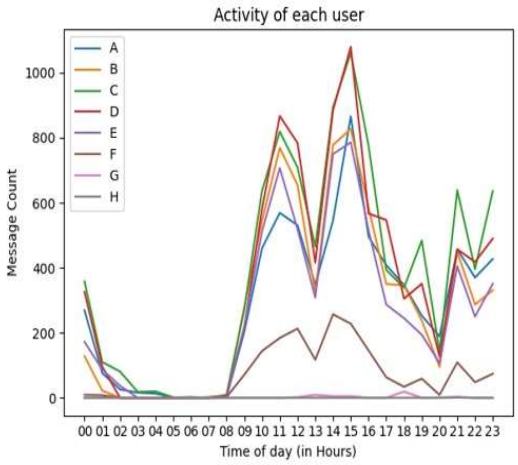
1. Updating readme.md file

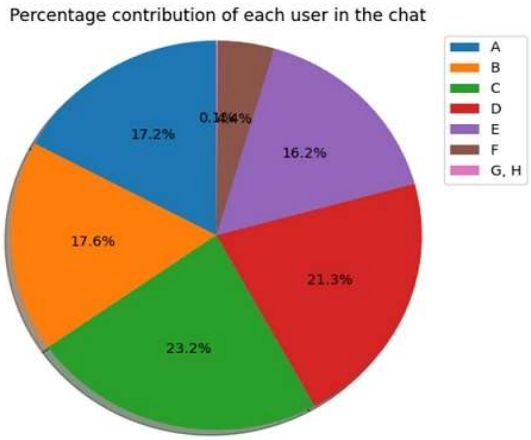
   As per an issue raised, the mentor desired that some screenshots of graphs, which the project generated should be added in the readme.md file to make it more comprehensive.

   I generated the chat analysis graphs, added to readme.md in my forked Repository, and sent a PR.

   This was successfully merged after minor changes related to cropping and alignment.

   It was my first ever PR ever sent!





2. Generating Test chats for Telegram

   While test chat templates were present for WhatsApp and Signal, the same were not available for Telegram. An issue was raised corresponding to this.

   My initial idea was to generate a test chat with 5 persons A,B,C,D and E using random() function. But doing this would have not generated a realistic conversation and analysis of large sample space will show equal contributions of A,B,C,D,E.

   Hence I decided to improvise and took up one of my own chats, from an old and large group in Telegram. I wrote a python program to optimise the chat, replace all messages with “TEST MESSAGE”, and other finer details. I also learnt how to handle JSON data in python since I had to import and export the test chat in JSON format.

   I added the Telegram test chats to my forked repo, and sent a PR, which was appreciated by the mentor, but could not be merged since there were more issues to be addressed, which I’ll take up shortly.

   Here is the code:

json_editor.py

C: > Users > avi > Desktop > json_editor.py > ...

```python
import json
f=open(r"C:\Users\avi\Desktop\tele.txt",encoding='utf-8')
f2=open(r"C:\Users\avi\final.json","w")

data=json.load(f)
l1=[]
p=data["chats"]["list"][6]
for i in p["messages"]:
    if "from" in list(i.keys()) and i["text"]!="" and i["from"]!=None:
        if ord(i["from"][0].upper()) <71:
            i["from"]="A"
            i["text"]="Test message"
            i["from_id"]="user1"
        if ord(i["from"][0].upper()) <76:
            i["from"]="B"
            i["text"]="Test message"
            i["from_id"]="user2"
        if ord(i["from"][0].upper()) <81:
            i["from"]="C"
            i["text"]="Test message"
            i["from_id"]="user3"
        if ord(i["from"][0].upper()) <86:
            i["from"]="D"
            i["text"]="Test message"
            i["from_id"]="user4"
        else:
            i["from"]="E"
            i["text"]="Test message"
            i["from_id"]="user5"
        l1.append(i)
dic={"messages":[]}
for i in l1:
    dic["messages"].append(i)

json.dump(dic,f2)
f.close()
f2.close()
```

Future Plan of action-

I will also make necessary changes in the file test.py, which is the central python file to run all the tests for WhatsApp and Signal. It was not written for Telegram since test chats were not available. Now, since test chats are ready, I would like to extend the code written for WhatsApp and Signal to Telegram chats as well in the days to come.

Conclusion and Acknowledgements

I greatly appreciate the role of my mentor Mr. Ravi, and the efforts with which he explained the project, and highlighted issues in my Pull Requests. Now, I have a clear idea of open-source contributions and associated platforms. I would like to continue contributing!

Also, I appreciate the hardwork of the KWOC-2021 Team, who have organised the event and provided me with such a great learning opportunity. They have always been available to address my queries promptly.

Thank You 😊

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