Semantic Climate Presents

THE HACK HANDBOOK!

PLEASE USE THIS DOCUMENT TO ADD VIEWS/ QUERIES/ COMMENTS/ PHOTOS

WHO ARE WE?

#semanticClimate is an open science text-data mining project making climate knowledge accessible to all. [Please go through some of our posts](#) to learn more:

TELL US ABOUT YOURSELF!

An Etherpad for Introducing yourself to us is here: https://pad.mozilla.org/p/mriirs

Final Submissions

Every team is expected to submit their 1. Code (GitHub and Google Colab links) 2. Slides 3. Video presentation (3 min.)

This Google Drive folder contains sub-folder for every team. Please navigate to your folder and make the submission:

https://drive.google.com/drive/folders/1dtlQQduFgrNuf7KmHgpvbacP2jYR2ah-?usp=drive_link

Deadline: 1430 IST (2024-02-27)

Themes

Greenhouse gases & Carbon Emission

Climate Data Modelling & Simulation

Climate change & Food security

Climate Responsive Architecture

Climate Justice & Management

Climate Action & Mitigation Strategies

Migration Statistics

Carbon Budget

Carbon Footprint

Slides

We will be following these slides during the orientation session.

climate_knowledge_hunt_feb_24.pptx

COLAB NOTEBOOK

Your MAIN COLAB NOTEBOOK IS HERE.

Pyamihtmlx:

https://colab.research.google.com/drive/1pPrL1W3h2zwLJ11EQZlfGvLhsgIiG-SE?usp=drive_link

Dictionary_creation:

https://colab.research.google.com/drive/14k697nS0cNHAPncjYMuCYgPf_kwASSgC?usp=sharing

Commands to run

pygetpapers (https://github.com/petermr/pygetpapers)

!pip install pygetpapers

!pygetpapers --query "climate change AND India"-k 10 -x --output "climate_change_india_10"

docanalysis (ht tps://github.com/petermr/docanalysis)

!pip install docanalysis

!docanalysis --project_name climate_change_india_10 --make_section --dictionary ORGANIZATION --output climate_change_india_org.c1sv

DOCUMENTATION: HOW DOES THE HACK WORK?

You will all be working in teams throughout the hackathon. If you have registered individually, we'll help you pick a team on the day. Each team will be expected to pick a challenge to work on after the orientation on the first day. We will be around to help all through the hackathon. Let us know if you have any questions. Hack away!

- **Daily Schedule** Although it's a hackathon, we have some exciting talks and game sessions in between! Check out the brochure.
- **Installations** We will be using cloud-based technologies like Wikibase and Colab. But there are some command line tools as well. So, it would be great if you all could have Python (3.9 or 3.10) installed on your laptop.
- Demos, Resources and Tech:: We've also curated some of our Colab Notebooks, Resources and Tools. It might be a good idea to go through the documentation. You can also find our video tutorials here.https://www.youtube.com/@semanticclimate/playlists

TEAM NAMES AND TOPICS!

Please add your names, team name and your choice of Topic here, whenever you are ready! An example is given below, keep adding to it!

1. Team Climate Crusaders!

Team Members: Anmol Negi, Ashwina Prasad, Aayush Kukreja, Ishita Singh, Paridhi Gupta.

We are a team of five students from MRIIRS pursuing Btech in Computer Science and Biotechnology. We strive to unearth insights that illuminate the pressing issues confronting our global community by showcasing our skills as budding climate researchers.

2. Team Believer!

Team Members: Prof. Mansiha Goel, Than Dar, Sachin, Jhanak Saxena, Nikita Ray

We are four students and one teacher Department of Biophysics, University of Delhi South Campus. We are a group of enthusiasts who are envisioned to make use of the resources for betterment of the society using science.

3. Team Abhyuday!

Team Members: Dr. Kapila Kumar, Hasmeet Kaur, Yachna, Harshita Choudhary, Kanav Sharma

We are a team of four students and one Assoc. Professor from Dept. of Biotechnology, MRIIRS. We are science enthusiasts continuously working on innovative research projects contributing to a better world. We are here to uplift the state of the environment.

4. Wildlife Whisperers

Team Member: Pratibha Chaurasia, Surabhi Seth, Navya Gupta, Loveleen Kour, Vanshika Verma

"We are the Wildlife Whisperers, a team united by our profound love for animals and climate. Our mission is to advocate for wildlife, understanding their silent whispers, and translating

them into actions that protect and preserve. We believe every creature has a voice that deserves to be heard, and we're here to amplify it. Together, we strive to make a difference, ensuring a safe and thriving environment for all wildlife."

5.Team Climate Defenders

Team Members: Dr. Bhawna Kalra, Sonia, Gutta Prudhvinadh, Joginder and HarshPriya

We are a team of five members, One Associate Professor and four students from diverse backgrounds. Bhawna, Gutta and Sonia from Genetics, Joginder from Agriculture. We came from SGT university, Gurugram and Harsha Priya from biotechnology, MRIIR, Faridabad. We are Interested in Climate change and its effect on land degradation, desertification due to global climate change

6. Team Remediators (Team 7)

Team Members: Shiwani, Maansi Rawat, Gunjana Boruah, Swathi Gangadharan, Shashank Bhardwaj

We are affiliated with the School of Human Ecology and the Center for Urban Ecology and Sustainability, Dr. B.R. Ambedkar University. Between us, our interests in ecology span physical science approaches as well as interests in cultural and political ecology. We are excited to learn better, automated ways to access and process climate data and literature!

7. Team name: Green Horizon

Team Members: Nidhi Didwania, Priti Bhowmik, Anuvart Kumar, Vivek Dagar.

Our team is a multidisciplinary group and affiliated with the Dept. of Biotechnology, Manav Rachna Centre For Medicinal Plant Pathology, Department of Electronics, Manav Rachna International Institute of Research and Studies. Team interest is in ecosystem services, conservation of resources, land & climate restoration.

8. **Team Binary Bosses**

Team Members: Siddharth Bhardwaj, Krishna Negi, Yash Babbar, Sidh Jain, Karan .

Our team is a group of 5 students affiliated with the Dept. of Computer Science, MRIIRS. The main interest of our team is to develop something that can contribute to the well being of the environment. We also share the interest in Politics and Environmental wellbeing.

9. **IMPACT MAKERS**

Team Members: Sawan Yadav, Samridhhi Srivastava, Diya Chauhan, Yogita Sharma, Nancy Thakur .

Our team is 5 students of Microbiology, Dept. of Biotechnology, MRIIRS. We are deeply intrigued in "Impact of climate change on food spoilage".

10. TEAM CRYPTC

Team members: Dr Sabiha Imran(,Srinivas Patil, Nilesh Barat

In our team Dr Sabiha Imran (Biotechnology) ,Nilesh (Computer Science) are affiliated to SET ,MRIIRS, Srinivas Patil (Biotechnology) is affiliated with MKU .we are creating a tool called CRYPTC to help industrial establishments to decide on the strategy which they want to use wrt afforestation ,recycling and composting methods emphasizing on situational awareness addressing their requirements,IPCC goals and scalability.
For more info visit
https://github.com/Carnit/semantic_TEAM_CRYPTC

FAQ

Please add any queries here.

An example of a hackathon submission: [UN Datathon 2023](#)

Please check out our YouTube channel for tutorials:
https://www.youtube.com/@semanticclimate/videos

SHARING YOUR FINAL OUTPUTS

Please add your team name and your comments, any ideas, code (GitHub, Google Colab Notebook links), documentation, pictures or video clips here, whenever you are ready!

Kindly submit a 3 min video

- Please include the following in your video;
    - Your team's name, number and members
    - Your query Inputs and the results
    - Any additional comments, and reviews