CodeBot : The Event Doc

Welcome to the Large Language Model Hackathon! This event is dedicated to exploring the potential of Large Language Models (LLMs) in building applications with the theme of the environment in mind. As one of the first hackathons of its kind, this event presents a unique opportunity to push the boundaries of LLMs and build innovative solutions that tackle some of the most pressing challenges facing our planet.

LLMs are some of the most powerful AI tools available today, capable of generating text that is virtually indistinguishable from that produced by humans. By leveraging these models, we can create applications that are more responsive, intuitive, and context-aware than ever before. With the right prompts and training, LLMs can be used to generate text that is both informative and engaging, making them ideal for building applications that educate and inspire action on environmental issues.

Task

The theme for the hackathon is “One earth,one family, one future”. Your task is to build a chatbot or PDF chatbot that’s relevant to the theme. (example problem statements are given below)

You are supposed to share your problem statement with us before 9 AM on 28th April 2023 (At the latest).

The deadline for the submission is 3 PM April 28th 2023.

Note: Participants are free to choose their own topics/application, However We encourage you to build with the theme in mind “One earth,one family,

one future”. We give some example applications or problem statements below.

Rules and Regulations

- All teams must register in advance and provide information about their team members, their skills, and their proposed project.
- All projects must be related to the environment and aligned with the theme "One earth. One family. One future."
- All projects must use LLMs as the backend. Participants are free to use any LLM platform they choose, including OpenAI's GPT-3 or similar models from 🤗face or cohere models.
- Teams are responsible for their own equipment, including laptops, software, and any other tools they require.
- All code, documentation, and other materials produced during the hackathon must be original and not previously published or copyrighted (However, teams are free to use assistive tools like ChatGPT).
- Teams are free to use any programming language, library, or framework to build their application, as long as it is compatible with their chosen LLM platform. However, we prefer python.
- All projects must be submitted by the deadline specified at the beginning of the hackathon along with proper documentation.
- Teams must present their project to the judges in the format specified at the beginning of the hackathon (If required) .
- Teams may consist of no more than three members. Each team must have a designated team leader who is responsible for coordinating team activities and communication with the organizers.

- Participants are not allowed to use copyrighted or licensed data without permission from the owner. All data used in the project must be properly cited and credited.
- Participants are expected to behave professionally and respectfully towards other teams, judges, and organizers. Any form of harassment, discrimination, or other inappropriate behavior will not be tolerated and may result in disqualification.
- The judges' decision is final and binding. No correspondence or discussion will be entered into with participants regarding the judging process or the results.

Rubrics

Technical Implementation (30 points): Evaluation of the technical implementation of the project, including the quality and complexity of the LLM models used, the performance and accuracy of the models, the efficiency and speed of the application, and the robustness of the code.

User Experience (15 points): Evaluation of the user experience of the application, including the ease of use, the clarity and quality of the instructions and feedback provided to the user, the design and visual appeal of the interface, and the overall user engagement.

Creativity and Innovation (20 points): Evaluation of the creativity and innovation demonstrated in the project, including the uniqueness and originality of the idea, the level of creativity and imagination shown in the project, and the extent to which the project pushes the boundaries of what is currently possible with LLMs.

Impact on Environment (10 points): Evaluation of the potential impact of the project on the environment, including the potential to reduce waste, increase sustainability, or promote environmental awareness.

Novelty of Idea (10 points): Evaluation of the novelty and originality of the idea presented by the project.

Progress (5 points): Evaluation of the progress made during the event, including the amount of work completed, the level of collaboration and teamwork demonstrated by the project team, and the ability to overcome technical challenges.

Utility of the Implementation (5 points): Evaluation of the practical utility of the project implementation, including its potential for real-world deployment, scalability, and adaptability.

Participation during Event (5 points): Evaluation of the level of engagement and participation demonstrated by the project team during the hackathon, including attendance at workshops, active participation in discussions and feedback sessions, and willingness to help and collaborate with other teams.

Example Problem Statements

1. Climate change is causing significant shifts in weather patterns, leading to increased frequency and intensity of extreme weather

events such as hurricanes, floods, and wildfires. However, predicting the exact location and severity of these events remains a challenge.

An LLM-powered weather forecasting system that uses machine learning to analyze weather data and make more accurate predictions about the timing, location, and intensity of extreme weather events. LLMs like ClimateBERT will be useful. (climatebert (ClimateBert) (huggingface.co))

There are a plethora of LLMs on HuggingFace, and what one can achieve with this is limited to only our creativity.

2. As the world is becoming increasingly aware of the need to address climate change and reduce our carbon footprint, there is a growing interest in making our homes more environmentally friendly. However, many homeowners lack the knowledge and resources to make informed decisions about how to make their homes more sustainable. This can result in unnecessary waste, energy consumption, and environmental harm. The challenge for this hackathon is to develop a chatbot that leverages the power of Large Language Models (LLMs) to help homeowners make their homes more environmentally friendly. The chatbot should be able to answer a wide range of questions related to sustainable home practices, such as reducing energy consumption, conserving water, minimizing waste, and choosing eco-friendly materials. The chatbot should be user-friendly and able to engage with users in natural language. It should be able to provide customized recommendations based on the user's location, home size, and other relevant factors. The chatbot should also be able to learn from user interactions and adapt

to their needs over time. The solution should be innovative and scalable, with the potential to reach a wide audience of homeowners. The ultimate goal is to empower individuals to make more sustainable choices in their daily lives, reduce their carbon footprint, and contribute to a more sustainable future.

3. Energy Consumption: The challenge for this hackathon is to develop a chatbot that leverages the power of LLMs to help individuals and organizations reduce their energy consumption in an environmentally friendly manner. The chatbot should be able to provide customized recommendations based on user behavior, such as turning off lights when not in use, using energy-efficient appliances, and reducing heating and cooling costs. The chatbot should also be able to learn from user interactions and adapt to their needs over time.
4. Waste Management: The challenge for this hackathon is to develop a chatbot that uses LLMs to help individuals and organizations manage their waste in an environmentally friendly manner. The chatbot should be able to provide personalized recommendations based on user behavior, such as reducing waste production, composting, and recycling correctly. The chatbot should also be able to track progress and provide feedback to users on their waste reduction efforts.
5. Transportation: The challenge for this hackathon is to develop a chatbot that uses LLMs to help individuals and organizations reduce their carbon footprint through sustainable transportation practices. The chatbot should be able to provide personalized recommendations based on user behavior, such as using public transportation, carpooling, biking or walking, and choosing eco-friendly vehicles. The chatbot should also be able to provide users with information on the environmental impact of

transportation choices and the benefits of sustainable transportation practices.

Deliverables

1. It is expected that all teams submit a minimal working prototype with streamlit (The bare minimum).
2. However, If its not possible, A minimal working video should be provided. But, please aim for the deployed working prototype (Deploying with streamlit is easy).
3. You will be expected to submit documentation also. We will share the template for documentation by tomorrow 12PM.
4. Timely Updates will be noted by organizers at random samples from 9 AM to 3PM.

The submission deadline is 3PM, the hard submission deadline is 4PM, tomorrow. If not submitted, that particular team will be disqualified.