**Blizzard Buddy**

**- A winter companion and motivator**

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**Section 1 - Introduction:**

Seasonal Affective Disorder (SAD) is most prominent during winter. People feel lonely during this time, feel unmotivated and depressed. They tend to overindulge in unhealthy junk foods. Through this project, I try to manage this problem, motivate a healthy lifestyle and also give a good conversational company.

What was your inspiration for making this project? While I was thinking about the topic given for hackathon, it was snowing heavily and was kind of boring and depressing. I thought everyone should be having the similar emotion and did a small research. I was shocked to find that about **11 million people** in the U.S. are affected by SAD each year, and 25 million more may have a milder form called the winter blues. This motivated me to contribute something to minimize the effects of SAD.

**Section 2 - Further information: Creativity**

**Solution 1: motivate through online challenge and leaderboards** considering easily obtainable metric through other well established websites.

Based on the research in this study:

Balancing calorie in and calorie out (<https://www.nhlbi.nih.gov/health/educational/wecan/healthy-weight-basics/balance.htm>),

People need to be motivated to balance the calories intake and the calorie being burnt out. This is easily achievable in summer just by being outdoors. However, this is not an easy task in winter. To solve this issue, I am hosting an online challenge called “Calorie in – Calorie out”. This gets the calorie intake and calorie burnt as input, gets the difference and updates the leaderboard – displaying the minimal calorie unburnt at the top.

**Solution 2: chatbot companion**

**Section 3 - Further information: Complexity (only for hackathon participants)**

* How did you make your project? What software / techniques did you use?
  1. NLP Model – to understand user input
  2. GPT2 Model – to generate suitable response
  3. Language to call the AI models – Python
  4. APIs for python to HTML communication - FLASK
  5. Webpage scripts – HTML/CSS/JS
  6. PyCharm Community Edition for code building and compilation
* How do the techniques you used help your project address our hackathon’s theme? Why did you choose the techniques you used?
  + The requirement is to understand the user input to the emotion level. This needs AI support to pick the right response. Using **GPT2Head model** enables choosing the vocabulary level, response length and the most applicable response with high probability.
* What challenges did you come across while making your project?  
  + **Challenges in Calories in calorie out app:**
  + Leaderboard implementation is only local currently. Need to improve the model using MySQL DB and PHP for storing more user data and arrange in display
  + Not able to webscrape from certain websites to directly access the calories consumed or burnt
  + **Challenges in building chatbot:**
  + Data limitations: Lack of specific & helpful training data
  + Fine-Tuning Complexity: Difficulties tuning hyperparameters for optimal performance.
  + Handling Ambiguity: Dealing with ambiguous user queries
  + Integration b/w HTML & Python – needed several fixes to avoid crashing
  + Forming teams to share load and to brainstorm ideas
  + Initially would have worked in a group of 3 - unfortunately, other 2 had family emergency, and could not contribute
  + Updating skills in python interfaces to front end – would enable making apps rather than web pages
* Do you have any technical aspects that you wish to exhibit to the judges?
  + Chatbot implementation and parameterization
  + Innovative health app using other existing online calorie counting apps

**Section 5 - Further information: Presentation (only for hackathon participants)**

* Do you have any aspects of the presentation that you wish to exhibit to the judges?
  + Youtube video with slide presentation, project demonstration and code walkthrough
  + code in github

**Section 6 - Further information: Anything else you want to mention (only for hackathon participants)**

* Do you have anything else that you wish to exhibit to the judges?
  + First time hackathon participation, did the project alone

**Section 7 - Conclusion: Future plans**

* Why do you think this project is an appropriate submission for this hackathon?
  + Followed the theme given in hackathon. Applied technical skills and creativity to solve the problem in hand
  + Tried best to give good presentation
  + Learnt a lot technologically and about hackathon submissions. An appreciation in this hackathon would motivate for higher accomplishments.