Tell us what your idea is.

Battery Brain is an Android Application which analyses the User's Behaviour and Tries to Predict using **Supervised machine learning algorithm and Survival Analysis** *the remaining time that the battery will last.*

It will also show how much the user has to charge the phone in order to achieve the current goal that he can set (whether he is travelling or going to a place where the user cannot charge the phone).
We will make the **data for our algorithm** *by using dumpsys batterystats, battery-historian, our own generating logs for analysing the variable feature sets like Wifi, Bluetooth, GPS, 2G/3G/4G, Screen, Battery Temperature,On Call, Latitude, Longitude, Hotspot, Data packets Transfer etc.*

Tell us how you plan on bringing it to life.

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1. *Code is uploaded in repository*
2. *This project will use google's ML kit Machine Learning as well tensor flow lite for Android. We are trying to predict the user's behaviour, what apps he will open, certainly what he will be doing etc. It will help us to recommend the user battery remaining time according to his usage. The whole usage learning will be on-device. It has to be on-device as user's behaviour can change daily, weekly or even hourly and we cannot learn our model somewhere else on the cloud.*

Currently *We have made our data and trying to find battery remaining time as well as user's behaviour and how much battery he have to charge in order to go somewhere where he cannot charge his phone..*

I have uploaded the sample app code that is running, it has been currently done by K-NN Supervised ML.

Google's Help is needed to generate the data and analyse more deeply as in future, I am planning to use Survival Analysis Algorithm to check. I'll be needing some Apis that can be used only for system apps as well as I am not well versed with Advanced Machine Learning Algorithms, so Google can help me achieve this task.

3. Timeline

January: *Collect Data and Study About Survival Analysis and The K-NN Approach.*

February: *Improve the Current RMS (Around 150 minutes) and Complete the code with the new Approach*

March: *Install on user's phone and collect the data and find the new use cases*

April: *Check for corner cases and complete the use case to incorporate in our algorithm to find battery remaining time as well as user's behaviour and how much battery he have to charge in order to go somewhere where he cannot charge his phone.*

May *: Kudos!! :)*

Tell us about you.

I am currently a working professional and a technology enthusiast and a keen learner. I am a B.Tech Graduate, and I have done some ML projects like here . It is a chatbot that assist doctors and patients in disease diagnosis and their treatment.