

Date	18-JUNE-2024
Team ID	740028
Project Title	Frappe Activity: Mobile Phone Activity Classification Using Machine Learning
Maximum Marks	3 Marks

Project Proposal (Proposed Solution) report

proposal report aims to transform loan approval using machine learning, boosting efficiency and accuracy. It tackles system inefficiencies, promising better operations, reduced risks, and happier customers. Key features include a machine learning-based credit model and real-time decision-making

Project Overview	
Objective	The primary objective is by classifying activities over time, the system can provide valuable insights into daily routines, habits, and behavioural changes. This information can be applied in various fields, including mental health research, lifestyle studies, and user experience research.
Scope	The scope of using mobile phone activity classification systems like Frappe Activity for analysing user behaviour patterns is broad and multidisciplinary
Problem Statement	
Description	The objective of the Frappe Activity project is to develop a robust machine learning-based system that leverages mobile phone sensor data to classify and analyse user activities. By doing so, the system aims to provide researchers and psychologists with a powerful tool to gain deeper insights

Impact	the challenges and harnessing the potential of mobile phone activity classification, Frappe Activity can make a significant positive impact on individuals and society as a whole, paving the way for a healthier, more secure, and more informed future.
Proposed Solution	
Approach	Record sensor data from mobile phones during different activities. Clean and organize the data for analysis. Identify key features from the data to represent activities. Train a machine learning model to classify activities. Launch the model in an app and update it based on user feedback.
Key Features	key features include classifying activities (walking, running, sitting), analysing activity duration and frequency, and examining patterns of activity transitions throughout the day. Researchers can study daily routines, identify behavioural trends over time, and understand how different contexts and environments influence activities.

Resource Requirements

Resource Type	Description	Specification/Allocation
Hardware		
Computing Resources	CPU/GPU specifications, number of cores	T4 GPU
Memory	RAM specifications	8 GB
Storage	Disk space for data, models, and logs	1 TB SSD
Software		

Frameworks	Python frameworks	Flask
Libraries	Additional libraries	scikit-learn, pandas, NumPy, matplotlib, seaborn
Development Environment	IDE	Jupyter Notebook, Visual studio code
Data		
Data	Source, size, format	GitHub 690, csv