PROJECT PLANNING PHASE PRODUCT BACKLOG, SPRINT PLANNING, STORIES, STORY POINTS

Date	14/11/2023
Team ID	Team-593161
Project Name	Anticipating Caloric Expenditure With ML
Maximum Marks	8 Marks

AI-Powered Calorie Expenditure Prediction: A Personalized Approach to Health Management

Anticipating caloric expenditure using machine learning (ML) techniques is revolutionizing the way we approach fitness and health monitoring. By leveraging ML algorithms and data analysis, these systems can predict and estimate the number of calories an individual is likely to burn during various physical activities. This technology relies on gathering data from sensors, wearables, or even smartphone applications to track movement patterns, heart rate, and other relevant metrics.

With ML models trained on large datasets, these systems can provide accurate and personalized predictions of caloric expenditure for different activities such as walking, running, cycling, or even specific exercises. This information can be invaluable for individuals looking to monitor their energy expenditure, plan their workouts effectively, and achieve their fitness goals.

The application of ML in anticipating caloric expenditure offers a range of benefits. It allows users to gain insights into their activity levels and make informed decisions about their diet and exercise routines. By having access to real-time estimates of energy expenditure, individuals can better manage their calorie intake and balance it with their physical activity, which can be crucial for weight management and maintaining a healthy lifestyle.

Moreover, ML-powered caloric expenditure systems can be integrated into fitness trackers, smartwatches, or mobile apps, providing users with a seamless and convenient experience. By leveraging the power of ML algorithms, these systems continuously learn and improve their accuracy over time, adapting to individual users' unique characteristics and preferences.

While ML-based caloric expenditure prediction brings numerous advantages, it is important to consider privacy concerns and data security. Proper measures should be in place to ensure the confidentiality and protection of personal information collected during the tracking and prediction process.

In summary, ML-enabled caloric expenditure anticipation is a groundbreaking development in the realm of fitness and health monitoring. By leveraging machine learning algorithms and data analysis, these systems empower individuals to make informed decisions about their physical activity and diet. With the potential to improve fitness outcomes and promote healthier lifestyles, ML-based caloric expenditure systems are a significant stride towards personalized and data-driven fitness management.

PRODUCT BACKLOG, SPRINT SCHEDULE AND ESTIMATION:

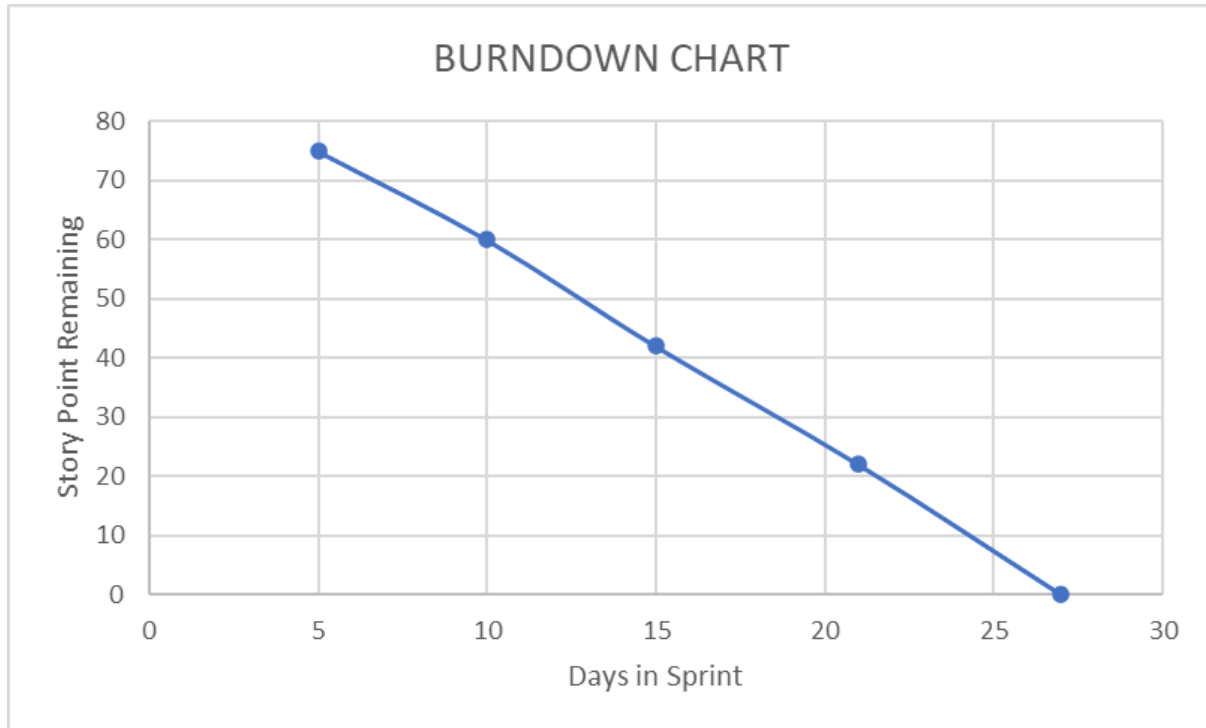| Sprint	Functional Requirement	User Story Number	User Story / Task	Story Point	Priority
Sprint-1	Data Collection	USN-1	As a user, I want the system to collect data on my physical activities, such as steps taken and heart rate.	2	High
Sprint-1	Data Analysis	USN-2	As a user, I want the system to analyze the collected data	3	Medium

			and provide insights on my caloric expenditure for different activities.		
Sprint-2	Prediction Model	USN-3	As a user, I want the system to develop a machine learning model that can anticipate my caloric expenditure based on historical data and activity patterns.	5	High
Sprint-1	User Interface	USN-4	As a user, I want a user-friendly interface where I can view my anticipated caloric expenditure for various activities and track my progress.	2	High
Sprint-2	Integration	USN-5	As a user, I want the system to integrate with my fitness tracker or smartphone app to automatically	4	Medium

			collect data and provide real-tim3e caloric5 expenditure2 estimates.4		
Sprint-2	Personalization	USN-6	As a user, I want the system to personalize the caloric expenditure predictions based on my individual characteristics, such as age, weight, and fitness level.	3	

Sprint	Total Story Points	Duration (Days)	Sprint Start Date	Sprint End Date (Planned)	Story Points Completed (as on planned End Date)	Sprint Release Date (Actual)
Sprint1	20	5 Days	24 Oct 2023	28 Oct 2023	20	28 Oct 2023
Sprint2	20	5 Days	29 Oct 2023	02 Nov 2023	15	03 Nov 2023
Sprint3	20	5 Days	03 Nov 2023	07 Nov 2023	18	07 Nov 2023
Sprint4	20	6 Days	08 Nov 2023	13 Nov 2023	20	14 Nov 2023
Sprint-5	25	6 Days	14 Nov 2023	19 Nov 2023	22	20 Nov 2023

BURNDOWN CHAT:

A burn down chart is a graphical representation of work left to do versus time. It is often used in agile software development methodologies such as Scrum. However, burn down charts can be applied to any project containing measurable progress over time.

BURNDOWN CHART

A line chart titled "BURNDOWN CHART" with the y-axis labeled "Story Point Remaining" ranging from 0 to 80, and the x-axis labeled "Days in Sprint" ranging from 0 to 30. The line starts at approximately (5, 75), then (10, 60), (15, 42), (21, 22), and (27, 0).

REFERENCE:

https://www.microsoft.com/en-us/research/project/academic/

https://ieeexplore.ieee.org/document/9753780

https://pubmed.ncbi.nlm.nih.gov/32150498/

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https://venturebeat.com/ai/welcome-to-the-augmented-future-watch-it-bring-you-to-your-knees/