Agile Concepts Overview

Sprint: A fixed period (e.g., 1 or 2 weeks) where a team completes a set of defined tasks.

Epic: A large feature or function that is too big to be completed in one sprint, so it's divided into smaller parts (stories).

Story: A specific task or requirement that contributes to completing an Epic.

Story Point: A number (based on the Fibonacci series) that represents the effort required to complete a story:

- 1 Very Easy
- 2 Normal
- 3 Moderate
- 5 Difficult

Story Points Used: 1, 2, 3, 5

Sprint 1 – Data Engineering Phase

Epic: Data Collection and Preparation for Liver Cirrhosis Analysis

In this sprint, the focus was on gathering, loading, cleaning, and preparing the data required for building machine learning models.

Gathering Data (USN1): Collected clinical liver datasets from reliable medical sources -2 Story Points

Loading Data (USN2): Imported datasets into Python using Pandas — 1 Story Point

Handling Missing Values (USN3): Addressed missing or null values using imputation techniques — 3 Story Points

Creating Fields (USN4): Derived new features such as enzyme ratios and severity indicators — 3 Story Points

Handling Inconsistencies (USN5): Cleaned duplicate or conflicting records — 3 Story Points

Total Story Points in Sprint 1 = 12

Sprint 2 – Visualization and Insight Generation

Epic: Visualizing Liver Health Data and Communicating Insights

This sprint focused on creating visual tools to explore the data and prepare it for clinical decision-making.

Bar Chart (USN6): Visualized key liver enzyme levels across patients — 2 Story Points

Pie Chart (USN7): Showed gender distribution of cirrhosis patients — 2 Story Points

Line Chart (USN8): Tracked disease progression over time − 2 Story Points

Map (USN9): Displayed regional distribution of liver cases -4 Story Points

Developing Dashboard (USN10): Built an interactive dashboard for liver health monitoring — 5 Story Points

Developing Story (USN11): Created personalized patient risk summaries using data storytelling — 5 Story Points

Total Story Points in Sprint 2 = 20

Team Velocity

Sprint 1 Story Points: 12

Sprint 2 Story Points: 20

Total Story Points: 32

Number of Sprints: 2

Velocity = $32 \div 2 = 16$ Story Points per Sprint

This means the team can consistently complete 16 story points worth of work each sprint, helping to plan future tasks like model training and evaluation.