Project Design Phase-II
Solution Requirements (Functional & Non-functional)

Date	03 October 2022
Team ID	PNT2022TMID34032
Project Name	Project - Classification of Arrhythmia by Using Deep Learning with 2-D ECG Spectral Image Representation
Maximum Marks	4 Marks

Functional Requirements:

Following are the functional requirements of the proposed solution.

FR No.	Functional Requirement (Epic)	Sub Requirement (Story / Sub-Task)
FR-1	• Authentication	Requirements are usually written in text, especially for Agile-driven projects.
FR-2	• External interfaces	
FR-3	**Economical service**	Assisting information
FR-4	**Feature assessment service**	Updated technical information and machinery selection

Non-functional Requirements:

Following are the non-functional requirements of the proposed solution.

FR No.	Non-Functional Requirement	Description
NFR-1	**Usability**	Usability defines how difficult it will be for a user to learn and operate the system. Usability can be assessed from different points of view: **Efficiency of use:** the average time it takes to accomplish a user's goals, how many tasks a user can complete without any help, the number of transactions completed without errors, etc. **Intuitiveness:** how simple it is to understand the interface, buttons, headings, etc. **Low perceived workload:** how many attempts

		users need to accomplish a particular task.
NFR-2	**Security**	Security requirements ensure that the software is protected from unauthorized access to the system and its stored data. It considers different levels of authorization and authentication across different users roles. For instance, *data privacy* is a security characteristic that describes who can create, see, copy, change, or delete information. Security also includes protection against viruses and malware attacks.
NFR-3	**Reliability**	Reliability defines how likely it is for the software to work without failure for a given period of time. Reliability decreases because of bugs in the code, hardware failures, or problems with other system components. To measure software reliability, you can count the percentage of operations that are completed correctly or track the average period of time the system runs before failing.
NFR-4	**Performance**	Performance is a quality attribute that describes the responsiveness of the system to various user interactions with it. Poor performance leads to negative user experience. It also jeopardizes system safety when it's overloaded.
NFR-5	**Availability**	Availability is gauged by the period of time that the system's functionality and services are available for use with all operations. So, scheduled maintenance periods directly influence this parameter. And it's important to define how the impact of maintenance can be minimized. When writing the availability requirements, the team has to define the most critical components of the system that must be available at all times. You should also prepare user notifications in case the system or one of its parts becomes unavailable.
NFR-6	**Scalability**	Scalability requirements describe how the system must grow without negative influence on its performance. This means serving more users, processing more data, and doing more transactions. Scalability has both hardware and software implications. For instance, you can increase scalability by adding memory, servers, or disk space. On the other hand, you can compress data, use optimizing algorithms, etc.