Project Design Phase-II
Technology Stack (Architecture & Stack)

Date	17 October 2022
Team ID	PNT2022TMID14702
Project Name	Classification of Arrhythmia by Using Deep Learning with 2-D ECG Spectral Image Representation
Maximum Marks	4 Marks

Technical Architecture:

The Deliverable shall include the architectural diagram as below and the information as per the table1 & table 2

Example: Order processing during pandemics for offline mode

Reference:
https://www.canva.com/design/DAFQhYQ0XjA/svcRLou5aD1zv7oT7Z0Vhg/edit?utm_content=DAFQhYQ0XjA&utm_campaign=designshare&utm_medium=link2&utm_source=sharebutton

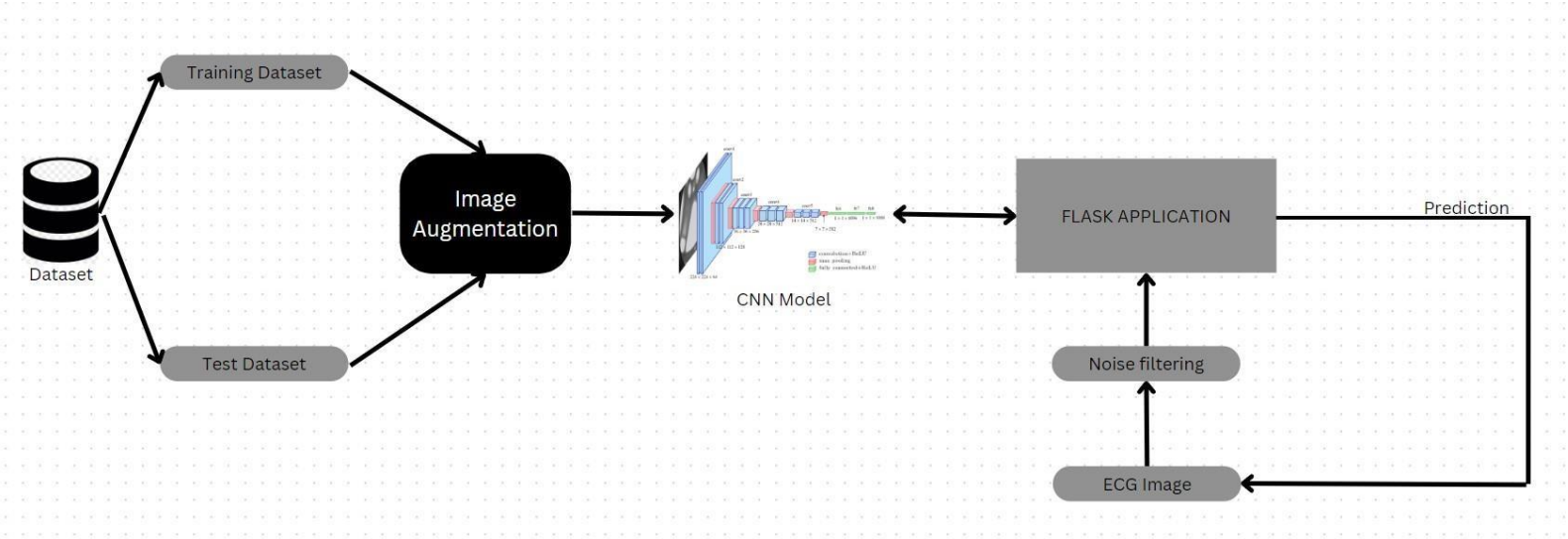

Table-1 : Components & Technologies:

S.No	Component	Description	Technology
1.	User Interface	The user can interact via the web interface	HTML, CSS, JavaScript / Angular Js / React Js etc.
2.	Splitting of training and test dataset	The dataset will be split into training and testing dataset.	Python, Keras.
3.	Image Augmentation	Image Augmentation will be done on the training dataset.	Python, ImageDataGenerator.
4.	CNN Model	The core image processing will be done in the developed CNN model.	Python, Tensorflow
5.	Noise reduction	Noise in Image will be reduced here	AutoEncoder, CNN.

Table-2: Application Characteristics:

S.No	Characteristics	Description	Technology
1.	Open-Source Frameworks	List the open-source frameworks used	Angular JS and other open-source tools
2.	Security Implementations	List all the security / access controls implemented, use of firewalls etc.	e.g. SHA-256, Encryptions, IAM Controls, OWASP etc.
3.	Scalable Architecture	Justify the scalability of architecture (3 – tier, Micro-services)	AWS
4.	Availability	Justify the availability of application (e.g. use of load balancers, distributed servers etc.)	Database applications
5.	Performance	Design consideration for the performance of the application (number of requests per sec, use of Cache, use of CDN's) etc.	Performance metrics analyzers, SEO tools