FEDERAL INSTITUTE OF SCIENCE AND TECHNOLOGY (FISAT)

Hormis Nagar, Mookkannoor PO, Angamaly, Kochi
Accredited by NAAC with 'A+' Grade

DEPARTMENT OF COMPUTER APPLICATIONS

SYNOPSIS OF THE MAIN PROJECT

Name of the Student	ANJALYKRISHNA A S
Batch & Roll Number	A 22
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Name of Project Guide	Ms.Joice T
GitHub ID	https://github.com/anjalykrishna522002
Project Title	CNN-LSTM Based Model for ECG Arrhythmias and Myocardial Infarction Classification
Area of the Project	Deep Learning
Date of Submission	31/12/2024

Description of Project:

The ECG Signal Classification System is a deep learning-based solution designed to classify ECG signals into three categories: Myocardial Infarction (MI), Abnormal Heartbeat, and Normal signals with high precision. This system leverages a 1D CNN-LSTM model, where CNN extracts spatial features from ECG waveforms, while LSTM captures the temporal dependencies in heart rhythms. By integrating these two architectures, the model effectively identifies subtle patterns in ECG data, enabling accurate diagnosis of heart conditions. The project aims to provide a reliable and scalable diagnostic tool to assist cardiologists in detecting and monitoring cardiac abnormalities, thereby reducing human error and improving overall diagnostic accuracy.

Front End & Back End Tools	HTML, CSS, JavaScript, Flask