**PDPM INDIAN INSTITUTE OF INFORMATION TECHNOLOGY, DESIGN AND MANUFACTURING JABALPUR**

### Madhya Pradesh-482005, India



Early Detection of Heart Attack

*Interim Report III, submitted in partial fulfilment of the requirement for the degree of*

**Bachelor of Technology (B. Tech) and Bachelor of Design (B. Des)**

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…Until Now

In the prior semester we have theorized the process of building an AI/ML based smart digital watch to monitor and detect heart problems specifically heart attach or stroke. We have understood the aim and importance of the project and the solution that we provide. We have estimated the budget and financial and non-financial requirement in order to complete the fabrication of a working prototype.

The Data

The dataset of study is the [Heart Attack Analysis & Prediction Dataset](https://www.kaggle.com/rashikrahmanpritom/heart-attack-analysis-prediction-dataset) made available via Kaggle. The dataset features a series of independent variables (age, sex, exercise induced angina flag, major vessel count, chest pain indicators, resting blood pressure,

cholesterol measures, fasting blood sugar, resting electrocardiographic results, and maximum heart rate achieved) and a binary indicator of low or high risk of heart attack.

The dataset comprises of 303 test cases and optimal for supervised machine learning algorithm.

The Algorithm

In the commencing semester we have designed a algorithm that takes prerecorded data to calculate variables in order to predict weather or not a person is likely to have a heart attack. The goal is to optimize the algorithm to highest accuracy and calibrate it to work with live and continuous data stream. The algorithm can be changed in phase two.



