VISVESVARAYA TECHNOLOGICAL UNIVERSITY

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PROJECT REPORT

On

"ACTIVE PREDICTION OF HEART DISEASE USING TECHNIQUES OF HYBRID MACHINE LEARNING"

Submitted by

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In partial fulfillment of the requirements for the degree of

BACHELOR OF ENGINEERING

In INFORMATION SCIENCE AND ENGINEERING under the Guidance of

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ALVAS INSTITUTE OF ENGINEERING AND TECHNOLOGY

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CERTIFICATE

Certified that the project work entitled "ACTIVE PREDICTION OF HEART DISEASE USING TECHNIQUES OF HYBRID MACHINE LEARNING" is a bonafide work carried out by

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in partial fulfillment for the award of BACHELOR OF ENGINEERING in **INFORMATION SCIENCE AND ENGINEERING** of the **VISVESVARAYA TECHNOLOGICALUNIVERSITY, BELGAUM** during the year 2020-2021. It is certified that all corrections/suggestions indicated for Internal Assessment have been incorporated in the report deposited in the departmental library. The project report has been approved as it satisfies the academic requirements in respect of project work prescribed for the Bachelor of Engineering Degree.

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ABSTRACT

Heart disease is one of the most significant causes of mortality in the world today. Prediction of cardio vascular disease is a critical challenge in the area of clinical data analysis. Machine learning (ML) has been shown to be effective in assisting in making decisions and predictions from the large quantity of data produced by the health care industry. We have also seen ML techniques being used in recent developments in different areas of the Internet of Things (IoT). Various studies give only a glimpse into predicting heart disease with ML techniques. In this paper, we propose a novel method that aims at finding significant features by applying machine learning techniques resulting in improving the accuracy in the prediction of cardiovascular disease. The prediction model is introduced with different combinations of features and several known classification techniques. We produce an enhanced performance level with an accuracy level of 88.7% through the prediction model for heart disease with the hybrid random forest with a linear model (HRFLM).