Annexure -B

***INDUSTRIAL TRAINING REPORT***

***CALORIES BURNT PREDICTION USING ML***

*Submitted in partial fulfilment of the requirements*

*for the award of the degree of*

**Bachelor of Technology**

**Computer Science and Engineering**

**Submitted To: - Submitted by: -**

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**2020-24**

**INDUSTRIAL TRAINING CERTIFICATE**

**DECLARATION**

I, Shivam Singh, student of B.Tech (Computer Science & Engineering) hereby declare that the Industrial training project entitled “Calories Burned Prediction Using ML” which is submitted to Department of Computer Science & Engineering, HMR Institute of Technology & Management, Hamidpur, Delhi, affiliated to Guru Gobind Singh Indraprastha University, Dwarka(New Delhi) in partial fulfilment of requirement for the award of the degree of Bachelor of Technology in Computer Science & Engineering, has not been previously formed the basis for the award of any degree, diploma or other similar title or recognition.

This is to certify that the above statement made by the candidate is correct to the best of my knowledge.

New Delhi

Ms. Rekha Kumari

Date:

(CSE Department)

**ACKNOWLEDGEMENT**

I am deeply indebted to Ms. Rekha Kumari for her invaluable guidance and support throughout the course of my project. Her expertise, insight, and encouragement were invaluable in helping me to shape the direction and outcome of my work. Without her assistance, this project would not have been possible.

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Finally, I would like to extend my thanks to Google collab and streamlit cloud for providing me with expensive hardware resource for free without their support, I would not be able to complete my project

This project would not have been possible without the support and guidance of these individuals, and I am deeply grateful for their contributions

**ABSTRACT**

In this project, I developed a machine learning model to predict the number of calories burned during physical activity. The model was trained on a dataset containing various physical activities and their corresponding calories burned. I implemented and compared the performance of multiple machine-learning algorithms, including linear regression, XGBRegressor, and random forests, to determine the most accurate model for our prediction task.

To evaluate the effectiveness of our model, I conducted experiments using cross-validation and compared the results to a test database. Our experimental results showed that the XGBRegressor algorithm outperformed the other algorithms and achieved an absolute mean error of just 2.7 which is very good for a machine learning model.

We also developed a user interface using Python and Streamlit, which allows users to input their physical activity duration and other related factors, and receive a prediction of the number of calories burned. The user interface was hosted on streamlit-cloud to facilitate easy access.

In conclusion, our machine learning model provides a reliable and accurate prediction of calories burned during physical activity, and the user interface allows for easy and convenient use by a wide range of users. This tool can be a useful resource for individuals looking to track and manage their caloric intake and physical activity levels.

Annexure -D

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