**A**

**PROJECT REPORT**

**ON**

**“Extracting Market Success or Failure Rate of a Product or Brand and Its Factors Based on Review Data Using Interpretable Machine Learning Models/Techniques”**

***Dissertation submitted in partial fulfillment of the requirement***

***For the award of degree of***

**MASTER OF TECHNOLOGY**

**IN**

**COMPUTER SCIENCE AND ENGINEERING**

SUBMITTED BY

1. **NIKHIL JOSHUA**

1005-19-742101

***Under the esteemed guidance of***

**Mr. VENKAT DAS** Garu**.**

Assistant Professor

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**CERTIFICATE**

This is to certify that the Project report entitled **“Extracting Market Success or Failure Rate of a Product or Brand and Its Factors Based on Review Data Using Interpretable Machine Learning Models/Techniques”,** being submitted by **A. NIKHIL JOSHUA** bearing Roll no **100519742101** in partial fulfilment of the requirement for the Award of the Degree of Master of Technology in Computer Science and Engineering, University college of engineering, OU.(Autonomous), Hyderabad, and will be a record of the bonafide work to be carried out by him under our guidance and supervision during the period **2020-2021.**

**Internal Guide Head of the Department**

**Mr. VENKAT DAS, B.E. Mrs.Prof.K.SHYAMALA** **, M.Tech, Ph.D.**

**Dept. of Computer Science & Engg. Dept. of Computer Science & Engg.**

**University College of Engineering. University College of Engineering.**

**DECLARATION**

I, named **A. NIKHIL JOSHUA** bearing H.T No: **100519742101** a bonafide student of **UNIVERSITY COLLEGE OF ENGINEERING OSMANIA UNIVERSITY**, would like to declare that the project titled **“Extracting Market Success or Failure Rate of a Product or Brand and Its Factors Based on Review Data Using Interpretable Machine Learning Models/Techniques”.** A partial fulfillment of **MASTER OF TECHNOLOGY** Degree course of **OSMANIA UNIVERSITY** is my original work in the year 2021 under the guidance of Assistant Professor **Mr. VENKAT DAS Garu** of the Department Computer Science & Engineering.

**A. NIKHIL JOSHUA**

**1005-19-742101**

**ACKNOWLEDGEMENT**

Determination and dedication with sincerity and hard work will lead to the height of success. In spite of the obstacles faced, the valuable suggestions and their best wishes helped to complete project titled **“Extracting Market Success or Failure Rate of a Product or Brand and Its Factors Based on Review Data Using Interpretable Machine Learning Models/Techniques”** successfully.

I would like to express my gratitude to all the people behind the screen who have helped me transform an idea into a real time application.

I would like to express my heart-felt gratitude to my parents without whom i would not have been privileged to achieve and fulfil my dreams. A special thanks to our Principal, **Mr.** **Prof**. **KUMAR MOLUGARAM Garu,** who most ably run the institution and have had the major hand in enabling me to do my project.

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**A. NIKHIL JOSHUA**

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ABSTRACT

We are trying to predict success/failure of a product using a review dataset. Which basically contains a review title and a text body. We will be using Sentiment Analysis and Count Vectorization for factor extraction. And then perform ML operations to identify which feature would be the best to work upon to improve product's sales. We'll also try to integrate LIME to interpret the results.