Department of Electrical and Computer Engineering
North South University

Senior Design Project

Product Recommendation System by Analyzing Customer Reviews and implementation using Django Based E-commerce website

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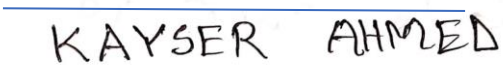
Spring, 2021

DECLARATION

This is to certify that this Project is our original work. No part of this work has been submitted elsewhere partially or fully for the award of any other degree or diploma. Any material reproduced in this project has been properly acknowledged.

Students' name & Signature

1. Kayser Ahmed



2. SUMIAYA KHAN

3. Md. Amzad Hossen

APPROVAL

The capstone project entitled "**Product Recommendation System by Analyzing Customer Reviews and implementation using Django Based E-commerce website**

" by **Kayser Ahmed (ID#162 0252 042), SUMIAYA KHAN (ID#171 1879 642), and Amzad hossen (ID #1**

642) is approved in partial fulfillment of the requirement of the Degree of Bachelor of Science in Computer S

and Engineering on May and has been accepted as satisfactory.

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ACKNOWLEDGMENT

First of all, we wish to express our gratitude to the Almighty for giving us the strength to perform our responsibilities and complete the report.

The capstone project program is very helpful to bridge the gap between the theoretical knowledge and real-life experience as part of Bachelor of Science (BSc) program. This report has been designed to have a practical experience through the theoretical understanding.

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ABSTRACT

This report presents a recommendation system and its implementation on a real time Ecommerce website. This will help the customer to discover new products that would please a customer, recommend products by monitoring customers activity like searching of products, along with the previous set of things a user enjoyed and also find a selection of products that would be enjoyed by a community of people. The biggest secret of achieving success in business is to provide better quality customer services that ensures customer satisfaction. A statistic shows that about 70% of purchase decisions are taken relying on how consumers believe, they are being served. Online shopping is on trend now a days where customer buys things or services without any middle way. However, to give customer satisfaction and earn more revenue, number of advertising ways are introduced. One of which is intelligently recommendation services or products. A product recommender system is a software that detects the consumer's behaviour on e-commerce sites and on the basis of that, suggests products that meets interest of consumers. This paper presents the design and implementation of a recommendation system on Ecommerce which will suggest the consumer with their relevant and desired products and make their online shopping more comfortable. For implementing this system using machine learning, three algorithms (Model Based Collaborative Filtering, Popularity Based Filtering, K means) are used. The system is designed in such a way that focused on a fresh customer's first visit on the company's website to when they perform repeat purchases. The system will be proved as user friendly and will effectively predict which products customers would like the most. The accuracy in matrix factorization using SVD is 97.7 percent and with KNN using item similarity is 84.56 percent.