**Capstone Project Proposal**

**Title: Predictive Analytics for Customer Churn in E-commerce**

## Introduction:

Customer churn is a significant challenge in the e-commerce sector. Retaining existing customers is far more cost-effective than acquiring new ones. Predictive analytics has emerged as a powerful tool for identifying customers who are at risk of churning. This project aims to develop a machine learning model to predict customer churn based on historical customer data, enabling businesses to implement proactive strategies to improve retention and increase profitability. This project is crucial as it provides actionable insights to combat the growing problem of customer attrition, which can directly impact business revenue and long-term growth.

**Objectives:**

The primary objectives of this capstone project are:

1. **Develop a predictive model**: Create a machine learning model to accurately predict customer churn based on historical e-commerce data.
2. **Identify churn factors**: Analyse and determine key variables that influence customer churn rates, such as purchase frequency and customer engagement.
3. **Provide actionable insights**: Offer business recommendations to reduce churn and improve customer retention strategies.
4. **Evaluate model performance**: Assess the accuracy and effectiveness of the model using key metrics such as precision, recall, and F1 score.