

## PREFACE

This Project Report has been made in complete fulfilment of the requirement of course: Six months Project for M.Sc. Data Science and Spatial Analytics (Sem 4) in the academic year 2023.

To work on this project, the data of Bike Sharing was collected from 1 January 2023 to 1 February 2023 from the website of the the Capital Bikeshare program in Washington, D.C. The data was scraped from the website with the help of Web Scraper.

This project aimed to understand the different algorithms utilised by bike rental companies to properly diagnose which contained the historical bike usage pattern with weather data spanning two years. The focus was kept on training a model to predict the number of bike rentals at any hour of the year given the weather conditions.

The challenge I faced while working on this project was the lack of availability of valid data. Due to the fuzziness of the bike-sharing data, a proper model cannot be created, as the weather conditions are a matter of coincidence. Anything can happen even after predicting a particular count.

During my project work, my knowledge regarding prediction systems has been enhanced. I have come across various parameters such as datetime, season, holiday, workingday, weather, temperature, humidity, windspeed etc., which is very helpful in providing the personalised prediction system to users.