ISM 370

Module 5 Project

Requirements

Project Name	Exploratory Analysis with Plotting – Bike Share Data
Project Due Date	Sunday by 11:59pm
Requirements	
In this project, you will again use Python to perform exploratory data analysis and plotting on the bike share dataset. You will be using plotting techniques to visualize the data and gain insights into the underlying patterns and relationships. This project will give you hands-on experience with data analysis and plotting in Python and will help you develop your skills in data visualization and data exploration. You will not need to complete a separate Word document for this project, but you will need to write down your insights and conclusions in text cells in your code file. Project Steps: 1. Read in the bike_share_data.csv file into your Python project. 2. Create and use a histogram to explore and better understand the distribution of the number of registered bike users. In a text cell below the output, write down the new insights that you gained from this plot. 3. Create a two bar plots. One should show the median number of registered riders (grouped by month) for each month for the year 2011. Create a second bar plot of the same data for 2012. In a text cell below the output, write down the new insights that you gained from these plots. 4. Create a bar plot showing the median number of registered riders (grouped by hour) for each hour for the month of July (include both years). In a text cell below the output, write down the new insights that you gained from this plot. 5. Create a bar plot showing the median number of registered riders (grouped by day) for each day (include both years). In a text cell below the output, write down the new insights that you gained from this plot. 6. Create a scatter plot to show the relationship between windspeed and the number of registered riders only for the month of March in the year 2011. (You will need to subset or slice the data to only include March data for 2011. In a text cell below the output, write down what you learn about this relationship from the plot. 7. In a new text cell at the end of your code, write down at least one business decision or objective you would make or pursue based on the insights you gained from your exploratory analysis.	
Grading	
Completing both the analysis and the writing requirements completely (in text cells for this project) and well are necessary to earn high marks on this project. Deficiency in either will result in lower marks. You are welcome to add additional functionality and to utilize your creativity in making the program even better.	
Deliverable	
Submit your Python file to Canvas.	