Applied Data Science
MSc in Big Data Management and Analytics
Assessment

Details will be discussed in the class

Data Analytics and Information Dashboards for the dataset in the selected domain

Part I (Assignment 2)

Exploratory Analytics and Visualisation of Data via Information Dashboard (40% of the overall module)

Outline the domain that you have selected.

Give the source of the data that you have acquired; is the data reliable; give necessary links and references to the resources.

Briefly describe each variable in the data, and describe your understanding of each variable and comment on that how each variable links & relates to others.

While undertaking this data analytics task, what the questions / issues that you consider can be answered / explored.

For whom these questions / issues are important and what kind of actionable intelligence you expect to gather. Clearly give a problem statement.

It is extremely important that the above points are clearly understood, and described at the start of this assignment; an incorrect and incomplete understanding and description of these could lead to bad grades to a work that is deemed unacceptable and not aligned with the assignment brief.

Once the above clear, please perform exploratory data analytics and write a brief report that what insights you get from these exploratory data analytics.

At this stage you need to develop at least 10 information dashboards. These dashboards should be designed well; should contain appropriate functions and filters; and graphs on individual dashboards should be linked where applicable. For each dashboard outline the process of developing the dashboard; your answer must include screenshots taken while you develop these dashboards and for the finished dashboards.

For each dashboards write brief descriptions of (1) describe its **target audience**, (2) its **purpose**, the **information** that it presents, (3) outline that what **actionable insights** the dashboard provides and which actions this may lead to, and whom should have this information (your audience). Clearly outline that how decision-making processes can benefit from these dashboards, and how these dashboards may lead to improved decision making.

Part II (Assignment 3)

Predictive Analytics and Visualisation of Insights (40% of the overall module)

Insights gained after performing exploratory analytics on your dataset, and considering various questions that the users of this dataset might have (outline the questions), you are required to identify at least four sets of variables where there might be relationship between the variables, and where exploring and understanding these relationships might lead to actionable insights. You are required to outline the above in your report.

You are then required to employ predictive / prescriptive (or other) data analytics approaches (details are discussed in the class) to understand these relationships.

You are required to present these finding as summery reports and using dashboards. You are required to develop at least one dashboard for each set.

You are required to develop and present report on the statistical modelling, give justification for applying these techniques, and models used, with implementation and **4** working dashboards.

And then, similar to part one, for each dashboards write brief descriptions of (1) describe its **target audience**, (2) its **purpose**, the **information** that it presents, (3) outline that what **actionable insights** the dashboard provides and which actions this may lead to, and whom should have this information (your audience). Clearly outline that how decision-making processes can benefit from these dashboards, and how these dashboards may lead to improved decision making.

You are required to develop two posters as part of this assessment; one representing part 1 and the other representing part 2. Imagine that you are required to use these posters to give a quick overview of your work at a conference. More details in this regard, will be discussed in the class.

Deliverable must include the softcopies of reports, posters; your Excel spreadsheet, your tableau file(s), and screenshot (images) of your dashboards.

Submission deadline: will be discussed in the class.

IMPORTANT: Your dashboards must include a variety of graph type such as Line Chart, Bar Chart, Trellis, Pie Chart, Histogram, Box Plot, Haet and Tree Map, Scatter Plot, Geographical Data (using Tableau Map), Geo Bubble. It is expected you will use these various graph types to show change over time, comparison, ranking, part-to-whole relationship, distribution, correlation, geographical Information and Maps.