**Assessment Task**

Working in groups of two-three students:- Select open data source(s); Determine what questions are to be answered; Apply the CRISP-DM methodology to analyse the data.

Reports to be completed and submitted in stages with the full report End Week 12

* Project Proposal
* CRISP-DM Business and Data Understanding
* CRISP-DM Data Preparation, Modelling, Evaluation
* CRISP-DM Deployment, Full Report All Stages

A Presentation should be prepared for the lectures during Week 12. It should include a ten-minute formal presentation followed by five minutes of questioning time from lecturers and the class. Have some slides prepared to cover any relevant back-up / detail for answering questions. Teams will be allocated time slots. Time limits will be enforced to allow all teams adequate time to present. The project will be evaluated as below based on the Grading Scheme included with this document.

* + Presentation /Artefact (.10) GROUP (2-3)
  + Report (.20) INDIVIDUAL

Key measurable objectives of the INFORMS Certified Analytics Professional exam are included. (Note:- for information only).

**INFORMS CAP Certified Analytics Professional competencies Business Problem Framing**

**(Ability to understand a business problem and determine whether the problem is suitable for an analytics solution)**

Objective 1: For the open data source selected, define the problem to be addressed Objective 2: Identify the stakeholders

Objective 3: Determine whether the problem is suitable for an analytics solution Objective 4: Refine the statement of the problem with any constraints

Objective 5: Define an initial set of business benefits

**Analytics Problem Framing**

**(Ability to reformulate a business problem into an analytics problem with a potential analytics solution)**

Objective 1: Reformulate problem statement as an analytics problem Objective 2: Develop ABT attributes and outputs

Objective 3: State the set of assumptions related to the problem Objective 4: Define the key metrics of success

**Data**

**(Ability to work effectively with data to help identify quality issues and identify potential relationships that will lead to refinement of the business and analytics problem)**

Objective 1: Identify data needs and sources Objective 2: Acquire data

Objective 3: Explore data visually

Objective 4: Harmonize, rescale and clean data

Objective 5: Document and report findings (e.g. quality report, data insights) Objective 6: Refine the business and analytics problem statements

**Methodology (Approach) Selection**

**(Ability to identify and select potential approaches/methods/algorithms for solving the business problem)**

Objective 1: Identify potential problem solving approaches (methods) Objective 2: Select software tools

Objective 3: Test approaches (methods) Objective 4: Select approaches (methods)

**Model Building**

**(Ability to identify and build effective model structures to help solve the business problem)**

Objective 1: Identify model structures Objective 2: Run and evaluate the models Objective 3: Calibrate models and data

Objective 4: Document and communicate findings (incl. assumptions, limitations, constraints)

**Deployment**

**(Ability to deploy the selected model to help solve the business problem)**

Objective 1: Perform business validation of the model

Objective 2: Produce the report with findings and recommendations for deployment