C4 Data Science
Continuous Assessment

Provisional Date Due	:	Wednesday, February 20th, 2019
Time	:	12:00 noon
Value	:	35%

INSTRUCTIONS TO CANDIDATES:

- Include your names and login-ids as a comment at the top of all of YOUR group's documents and/or code.
- Your group will need to submit all program (including a standalone executable if applicable) and document files for this assessment. Your group may use a DVD/memory key, GitHub account (preferably) etc. to submit your files.
- **NOTE** It is your group's responsibility to keep a backup of all solution and other files for this assessment.
- Your group may use any programming language(s) it chooses, however you must provide a design of your solution. You may not use a scripting language without approval from the lecturer.
- This is a group assessment (groups of three) however **students will be assessed and marked individually** therefore it is important for each group member to clearly identify their work on the project.
- All usual exam regulations apply.

Project Description

You (the group) are required to complete a data science based research project. You are free to choose any data science related topic, however **you must discuss your topic** and **it must be approved by your lecturer**. In addition, typically, your research must include a **significant** programming application prototype.

You are required to provide a functional specification outlining how your application will work (the main tasks the application will perform). **You must agree this functional specification with the lecturer** before you proceed with the development of your application.

You must complete a design for your application which would be sufficient to allow another programmer to implement your solution given your functional specification and design. When designing your solution you should attempt to make the solution as extensible as possible. Similarly, the input to your application should not be limited/restricted to a fixed size.

A short presentation of your work to date will take place just before the Christmas break. Your group is also required to present their project work including a demonstration of the final application prototype in the laboratory. There will be no marks for this demonstration however your application will not be awarded any marks if you fail to demonstrate it. This is your opportunity to demonstrate the quality of your application and/or research.

Include detailed comments in your code as you deem necessary. Marks will be awarded for adhering to best programming practices (good use of comments, naming conventions, using functions etc.).

Your final submission must include a report on the project, the project outcome(s) and anything else that you feel is appropriate to be included.

If you have any queries regarding this assessment, please do not hesitate to contact the lecturer at any time.

Deliverables (including ***indicative*** content)

1) Project proposal (5%) Wednesday, September 26th, 2018
   This document details the project that you are undertaking and include the following, or broadly similar, information:
   a) Purpose and goals (including proposed learning outcomes)
   b) Project strategy
   c) Scope
   d) Deliverables
   e) Functional interfaces
   f) Standards (specific to the project)
   g) Reference/research documents

2) Functional specification (10%) Wednesday, October 10th, 2018
   a) Objectives
   b) Architecture
   c) Functionality
      a. Functionality description
      b. User interface description
      c. External interfaces
   d) Potential Risks/Issues
   e) Gantt chart/ time line for the project

3) Design document (20%) Wednesday, November 7th, 2018

4) Work to date in–class presentation (5%) Wednesday, December 5/12th, 2018

5) Implementation (35%) Wednesday, February 6th, 2019

6) Final project report (15%) Wednesday, February 13th, 2019
   a) Introduction
   b) Project description
   c) Project outcomes (what was achieved/learned)
   d) Analysis of project success
   e) Conclusion(s)

7) Final in-class presentation (10%) Wednesday, February 20/27th, 2018

*You may include appendices in the various documents as you deem appropriate/necessary. You may include/exclude sections in the above outline for deliverables as you see fit. The written work completed is expected to be written amd presented professionally and should be of publication standard.

E&OE