14.01.20

14.00 - 15.30pm

SPEC 9995 Data Visualisation

Basement 2, Kevin Street

Programme Code: TU059, TU060, DT265
Module Code: SPEC 9995
CRN: 22805, 22347, 30526

TECHNOLOGICAL UNIVERSITY DUBLIN

KEVIN STREET CAMPUS

MSc. in Computing
(Full-Time)

Year 1

MSc. in Computing
(Part-Time)

Year 1 and 2

Higher Diploma in Computing

Year 1

SEMESTER 1 EXAMINATIONS 2019/20

Data Visualisation

Dr. Cathy Ennis
Dr. Deirdre Lillis
Dr. Barry Haycock-TU059 - TU060
Mr. David Curran - DT265

Duration: 1 hour 30 minutes

Answer each of the following questions.

1. **(a)** Describe in detail, using examples where appropriate, four different classifications of visualisations. (N. Iliinsky & J. Steele., 2011).

(20 marks)

(b) For single variable comparisons, discuss examples of datasets that might be best represented by each of the following visualisations over the other:

- Histogram
- Box plot

(14 marks)

(c) What visualisation would be most appropriate to show relationships for the following types of data? Give an example and outline one limitation of each:

- Two dimensional discrete points
- Three dimensional discrete points

(16 marks)

2. **(a)** What does the term 'Natural Ordering' mean when choosing appropriate visual encodings for your data? Illustrate your answer with references to Colour and Shape.

(20 marks)

(b) Give an overview of five principles outlined by the laws of Gestalt Theory. Use examples to illustrate your answer.

(15 marks)

(c) Explain the term Cartograms in relation to map-based visualisations. Briefly outline four different types of Cartograms and their properties.

(15 marks)