

| Module Details         |                                |
|------------------------|--------------------------------|
| <b>Module Title:</b>   | Big Data Visualisation (PG)    |
| <b>Module Code:</b>    | COS7046-B                      |
| <b>Academic Year:</b>  | 2019-20                        |
| <b>Credit Rating:</b>  | 20                             |
| <b>School:</b>         | Department of Computer Science |
| <b>Subject Area:</b>   | Computer Science               |
| <b>FHEQ Level:</b>     | FHEQ Level 7 (Masters)         |
| <b>Pre-requisites:</b> |                                |
| <b>Co-requisites:</b>  |                                |

| Contact Hours  |       |
|----------------|-------|
| Type           | Hours |
| Lectures       | 24    |
| Tutorials      | 3     |
| Laboratory     | 24    |
| Directed Study | 148   |

| Availability |                                                 |
|--------------|-------------------------------------------------|
| Occurrence   | Location / Period                               |
| BDA          | University of Bradford / Semester 1 (Sep - Jan) |

| Module Aims                                                                                                                                                                                                                                                                                                                    |
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| <p>The aim of this module to provide you with key principles and techniques of data visualisation. By completing this module you will gain advanced knowledge and skills on developing methods and techniques of data visualisation to improve comprehension, communication, and decision making in big data applications.</p> |

| Outline Syllabus                                                                                                                                                                                                                                                             |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p>(1) Visualization techniques and user requirements;<br/> (2) Analysis techniques to critique examples of visualizations;<br/> (3) Interpretation of multidimensional, big and complex data formats;<br/> (4) Application of data visualisation to real-life problems;</p> |

(5) Knowledge extraction from big data using data visualizations.

### Learning Outcomes

|   |                                                                                                                              |
|---|------------------------------------------------------------------------------------------------------------------------------|
| 1 | Demonstrate an advanced understanding of modern data visualisation methods and systems.                                      |
| 2 | Demonstrate a practical and advanced ability in the implementation of data visualisation techniques in practical situations. |
| 3 | Deploy enhanced technical analysis and problem solving skills, advanced written and presentation skills.                     |

### Learning, Teaching and Assessment Strategy

The delivery of the module will consist of lectures and lab classes supplemented by students own lab work and directed study. Formal lectures will outline the theoretical principles of data visualisation.

The coursework will involve students in the practical visualisation of real-life data sets. Supplementary assessment is by examination, based on the original assignment.

### Mode of Assessment

| Type      | Method     | Description                                                                    | Length      | Weighting |
|-----------|------------|--------------------------------------------------------------------------------|-------------|-----------|
| Summative | Coursework | Exercises on the development of visualisation solution to a real-life problem. | -1500 words | 50%       |
| Referral  | Coursework | Individual supplementary assessment                                            | -3000 words | 100%      |
| Summative | Coursework | Exercises on the development and creation of big data visualisation system.    | -1500 words | 50%       |

### Reading List

To access the reading list for this module, please visit <https://bradford.rl.talis.com/index.html>.

*Please note:*

*This module descriptor has been published in advance of the academic year to which it applies. Every effort has been made to ensure that the information is accurate at the time of publication, but minor changes may occur given the interval between publishing and commencement of teaching. Upon commencement of the module, students will receive a handbook with further detail about the module and any changes will be discussed and/or communicated at this point.*