UNIVERSITY of BRADFORD

Module Descriptor

Advanced IoT (Data Science for IoT)

Module Code:	COS7043-B
Academic Year:	2018-19
Credit Rating:	20
School:	Department of Computer Science
Subject Area:	Computer Science
FHEQ Level:	FHEQ Level 7 (Masters)

Pre-requisites:

Co-requisites:

Contact Hours

Type	Hours
Lectures	12
Seminar	12
Laboratory	24
Directed Study	152

Availability Periods

Occurrence	Location/Period
	University of Bradford / Semester 2 (Feb - May)

Module Aims

Outline Syllabus

IoT architecture modalities; IoT analytics, machine learning and data mining for IoT, Predictive Analytics and Deep learning, Complex Event processing, IoT analytics platforms(including AWS, Microsoft & Google offerings), Edge/Fog analytics, Applications in Industry4.0 and smart cities, steam reasoning and analytics, IoT innovations and open problems.

Module Learning Outcomes

On successful completion of this module, students will be able to...

1 Critically review a range of data science solutions for a variety of IoT analytics scenarios, and evaluate their efficiency for industrial applications.

2 Demonstrate critical understanding of the data science solutions development process for IoT systems.

3 3. Analyse, evaluate, design and implement data science solutions for a variety of industrial IoT applications.

4 4. Apply industrial standards in developing IoT applications.

5 5. Seek information from appropriate sources.

6 6. Demonstrate problem solving techniques and preparation for further research in the area.

Learning, Teaching and Assessment Strategy

The delivery of the module will consist of lectures with real-world case studies and directed study. Concepts, principles & theories are explored in formal lectures and reinforced through case studies.
Formal assessment will be through coursework involving the development of IoT systems as case studies for the use of IoT data in various applications.You will have opportunity to select course work based on existing real-world projects in different labs. Supplementary assessment is by coursework, based on the original assignment.

Mode of Assessment

Type	Method	Description	Length	Weighting	Final Assess'
Summative	Coursework	Design and Development of a data science solution for an IoT	0-3000 words	60%	No
Summative	Coursework	Research paper on IoT and Data Science	0-2000 words	40%	Yes
Formative	Coursework	A proposal for choice of an IoT use case and problem description	-1000 words	%	No

Legacy Code (if applicable)

Reading List

To view Reading List, please go to **rebus:list**.