

The University of Leeds

School of Computing

COMP5850M Coursework 2 - 2019/2020

Deadline: Wednesday 29 April 2020, 17:00

1 Introduction

Cloud computing has led to several advancements in the underlying technologies such as containers and Software Defined Networks. These developments in turn have led to several emerging trends such as Edge computing, serverless computing, and Software Defined Computing. In addition to these, other emerging trends in ICT such as Big Data, machine/deep learning and blockchain technology have started influencing the cloud computing research agenda and have offered wide opportunities to deal with the open issues in cloud related challenges, e.g. security.

The research paper **A Manifesto for Future Generation Cloud Computing: Research Directions for the Next Decade** [BSC⁺18] identifies the major open challenges in cloud computing, emerging trends, and impact areas. It then offers research directions for the next decade, thus helping in the realisation of future generation cloud computing. This piece of coursework requires you to review this paper emphasising on the current/future developments in application domains and other aspects such as architectures, technologies, performance etc.

You should ensure the on-going knowledge sharing activities for this piece of work is supported. You probably are aware that this assessment will be subjective as it is the work/opinion of one student. Hence what we are looking for is a systematic approach to evaluation and an effective presentation of the reasoning.

Deliverables. A **report** including the most exciting thing you have found out about the paper and a **short test** on Minerva.

2 Useful Resources

Useful resources are available on COMP5850M module area on Minerva: <https://minerva.leeds.ac.uk>

3 Report Submission

Use the document **Report** available in the coursework folder to report your written answers to the questions. Submit the document through the link **Report Submission**. Microsoft Word and pdf formats are acceptable (pdf is encouraged).

4 Test

The format of the test is a Multiple Choice/Multiple Answer Questions. It will be available in the coursework folder on Wednesday 29 April 2020, 9:00 - 17:00 UK Time. Ensure you complete it by 17:00.

5 Marking Scheme

Report	30
Test	20
	<u>50</u>

Weight: this coursework accounts for 20% of the assessment.

References

- [BSC⁺18] Rajkumar Buyya, Satish Narayana Srirama, Giuliano Casale, Rodrigo Calheiros, Yogesh Simmhan, Blesson Varghese, Erol Gelenbe, Bahman Javadi, Luis Miguel Vaquero, Marco A. S. Netto, Adel Nadjaran Toosi, Maria Alejandra Rodriguez, Ignacio M. Llorente, Sabrina De Capitani Di Vimercati, Pierangela Samarati, Dejan Milojicic, Carlos Varela, Rami Bahsoon, Marcos Dias De Assuncao, Omer Rana, Wanlei Zhou, Hai Jin, Wolfgang Gentzsch, Albert Y. Zomaya, and Haiying Shen. A manifesto for future generation cloud computing: Research directions for the next decade. *ACM Computing Survey*, 51(5), November 2018. <https://arxiv.org/abs/1711.09123>.