

Assessment 1: Video Review of AWS

Due: 11:59 PM AEST Sunday of Week 2

Weight: 15 %

Length: 10-12 minutes

Overview

In this assessment, you will produce a video presentation reviewing Amazon Web Services- the common platform used to build, train and deploy a machine learning model. Additionally, you will review the Machine Learning services of the ML cloud platforms.

The purpose of the assignment is to enable you to:

1. Introduce cloud computing platforms: AWS, Amazon SageMaker
2. Understand the procedure of building, training and deploying a machine learning model in Amazon SageMaker.
3. Communicate data science concepts orally and in video format

Assessment submission:

Include the following in your submission

- Submit a single video document to Learn JCU.
- The task cover sheet
- Include your last name and your first name in the file names
- Upload all submission files in one go. You can upload the files 3 times, the last submission is graded.

A word on plagiarism

Plagiarism is the act of using another's words, works or ideas from any source as one's own. Plagiarism has no place in a University. Student work containing plagiarised material will be subject to formal university processes.

Background

Machine learning cloud platforms have become essential to data science as the economy of scale the cloud platforms have developed enables leading edge computing resources to be economically available. Additionally, the cloud platforms enable data science solutions to be easily scalable and deployable, again reducing the traditional capital expenditure of enterprises.

Assessment Tasks

Using the perspective: A senior data science project leader is considering AWS for a machine learning project. The leader has asked you to present a short review of Amazon to better understand the service.

1. **Explain** what AWS is
2. **Review** the main Machine Learning service(s) offered by AWS
 - Discuss the supported programming languages
 - Discuss the supported machine learning algorithms and frameworks
 - Discuss security of using AWS
 - Present the supported computational resources (e.g CPU, GPU, clusters)
3. **Review** AWS
 - Briefly describe the procedure of building, training and deploying a machine learning model in AWS SageMaker
 - Highlight advantages/limitations/restrictions of using AWS
4. **Use** a mixture of visual aids in the video presentation to support your video recording, i.e Tables, images/visuals.

Marking Criteria and Rubric: MA5852 Assessment 1

Criteria	High Distinction	Pass	Fail
Review AWS 40% of total grade	Demonstrate superior ability to critically review and concisely summarise information	Demonstrate elementary ability to review and summarise information	Demonstrate poor or no ability to review and consolidate information
Review Machine Learning Services offered on the cloud platforms 20% of total grade	Demonstrate superior ability to critically review and concisely summarise information +90% of all ML services listed and concisely discussed	Demonstrate elementary ability to review and summarise information +75% of all ML services listed and adequately discussed/	Demonstrate poor or no ability to review and consolidate information <75% of all ML services listed and partially discussed.
Presentation style of video 40% of total grade	<ul style="list-style-type: none"> - The length video does not exceed the maximum length required. -Information presented in a highly logical sequence -Demonstrates good knowledge in the topic through clear explanations and elaboration where required -Credible and accurate analysis based on solid evidence with citation throughout the presentation -Visual aids are carefully selected to support content, and are not overly busy and do not detract from the presentation. 	<ul style="list-style-type: none"> -Information presented in a reasonable sequence -Demonstrates knowledge in the topic through some explanations where required, needs some elaboration -Basic analysis based on certain evidence but the citation is not properly presented throughout the presentation -Visual aids are used to support content, and are overly busy and a bit detract from the presentation. 	<ul style="list-style-type: none"> -Lack of logic in presenting information -Lack of explanations or elaboration where required -Poor analysis without solid evidence -Lack of visual aids, or visual aids are overly busy and detract from the presentation.

