Opposition report for degree project

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DV1478: BACHELOR THESIS IN COMPUTER SCIENCE

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Thesis	Title	Comparison of GCP and AWS using usability heuristics and cognitive walkthrough while creating and launching Virtual Machine instances in Virtual private cloud
	Author(s)	Sree kavya Ganja, Prudhvi Nath Naidu Cherukuri

1 Introduction

The reviewed research work deals with "Comparison of GCP and AWS using usability heuristics and cognitive walkthrough while creating and launching Virtual Machine instances in Virtual private cloud" written by Sree kavya Ganja, Prudhvi Nath Naidu Cherukuri. Usage of cloud services and cloud computing has become increasing in recent years. Cloud computing deals with data storage, computational resources, networking capability and a lot more. Parallel to the usage of cloud services, cloud service providers are also increased in recent years. Some of the large corporations which offer cloud services to society are Amazon, Google, Microsoft, IBM. The cloud computing services are mainly divided into Iaas (Infrastructure as a service), Paas (Platform as a service), Saas (Software as a service). The cloud service providers follow the rule "pay as you use", which means the user should pay the amount according to the service usage. Amazon provides services through AWS (Amazon web services), Google provides services through GCP (Google cloud platform), Microsoft provides services through Microsoft Azure, and IBM provides services through IBM Bluemix and IBM SoftLayer. They offer a limited number of free credits for the user to use the services in the platform. This research focuses on the user interaction and user experience in using cloud platforms like GCP and AWS. The authors choose to compare and evaluate the cloud services user interface using usability heuristics and cognitive walkthrough. The results of the research are depicted graphically. After performing Cognitive walkthrough authors observed and concluded that the user interface of GCP is more flexible and efficient in terms of user interaction and experience with in the scope of study.

2 Critical review

The reviewed work is quite readable and understandable to the novel reader. In the Abstract, they gave a brief introduction and an overview of the research work. Explaining the usage, importance, and different types of cloud services and cloud service providers and explaining the cognitive

walkthrough in the Introduction gives a clear picture of the thesis and justified title. They clearly explained the aim and objectives, and the research questions are good.

In the section1.3 Background - Explained cloud computing, HCI principles and A/B testing and other testing methods, but I feel some more explanation needed about HCI principles.

In chapter 2, Related work - the authors explained clearly about the research papers, but I feel that authors can conclude the chapter with an overview of knowledge gained from the research papers.

In section 3.1, choice of cloud services - author explained about GCP and the option of choosing GCP, but they don't explain AWS, but they mention the choice of AWS.

In section 3.2 and 3.3, they clearly explained the cognitive walkthrough, conducting it and usability heuristics, and mapped the usability heuristics with the task and tabulated.

In section 3.4.1 Tasks performed - the authors specified how to create an account in GCP but not about the account creation in AWS. They also mentioned the free credits offered by GCP for every user for the first 90 days and noted they are using those credits, but they did not mention the AWS whether they are using free credits or pay as they use.

In section 3.4.2 and 3.4.3 authors explained applying usability heuristics and conducting cognitive walkthrough, which is clear enough.

In section 4.1, Under Task-1 authors mentioned the clarity of AWS controls by attaching the results graph but not explained about GCP. In Task-2, they said about understanding the controls in AWS but not about the GCP. IN Task-3, they depicted the results graphs of AWS but not GCP.

In section 4.2 Comparison of GCP and AWS using Usability Heuristics – I think the authors justified the section.

In chapter 5, Discussions – the authors discussed the research question in a deeper view, but I feel adding more information.

- RQ1 – In paragraph 2 adding the information about the usage of free credits in the cloud platform.
- RQ2 – Adding a picture of features and functionalities offered in GCP.
- RQ3 – I think the explanation is good enough.

In section 6.1 conclusion - they concluded which Cloud platform has given the better user experience from the results of the cognitive walkthrough.

In section 6.2, Future work - they have given many more ways to expand this research work. Still, I feel the authors can include work regarding changing the tasks in the cloud platforms and conducting the cognitive walkthrough on a larger number of users.

The overall presentation, the structure is well. They followed the thesis format well.

3 Required changes

- The authors need to Conclude chapter 2 with an overview of the Related work.
- The authors need to explain AWS in section 3.1.
- The authors need to explain the free credits and details of creating an account in AWS in section3.4.1.
- In section 4.1, the authors need to add the result analysis picture of GCP and explain them in all the 3 Tasks.
- Adding some more information about the free credits in RQ1, attaching a picture of features and functionalities offered in GCP.
- The author needs to add some more information in future work in section6.2, like changing the tasks in cloud platforms and conducting cognitive walkthrough on a larger number of users.

4 Recommended changes

The author needs to explain HCI principles in section 1.3.