SUMMER INTERNSHIP



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FACULTY GUIDE – Dr. GAURAV RAJ

ACKNOWLEDGEMENT

I received a fantastic opportunity for learning and career advancement during my internship with Google. I therefore think of myself as a really fortunate person because I was given the chance to take part in it. Having the opportunity to meet so many lovely people and professionals who guided me through this internship time makes me grateful as well.

I would like to extend my sincere gratitude to Dr. Gaurav Raj for contributing to worthwhile decisions and providing required counsel and direction. I'd like to express my gratitude for his contribution right now.

ABSTRACT

One of the top cloud APIs today is Google Cloud Platform (GCP). Despite being founded only five years ago, GCP has experienced significant growth thanks to its extensive, reliable infrastructure and wide range of public cloud services. Developers can utilise the GCP RESTful API, which is defined in HTML pages on the GCP website, to use these services. However, because the GCP API documentation is written in English prose and not formal technical language, it has a number of flaws, including informal heterogeneous writing, imprecise types, implicit attribute metadata, hidden links, redundancy, and a lack of visual support. The cloud developers obviously require a precise characterization of the information and actions in GCP in order to prevent confusion and misunderstandings. In order to clarify the resources provided by GCP, this work introduces GCP MODEL, an implied formal model-driven specification of GCP. GCP MODEL is built using the open source model-driven Eclipse-based OCCIware tool chain and complies with the Open Cloud Computing Interface (OCCI) metamodel. With the use of our GCP MODEL, we provide fixes for the flaws we found.

TABLE OF CONTENTS

1. Cloud infrastructure

Implement, deploy, migrate, and maintain applications on cloud infrastructure.

1. Application development

Modernize legacy services or build cloud-native applications.

1. Kubernetes, hybrid, and multicloud

Build, deploy, and maintain applications on-premise, in the cloud, or across providers.

1. Data engineering and analytics

Design and build data processing systems.

1. API management

Develop and manage APIs to build new applications and connected experiences using Apigee.

1. Networking and security

Manage and scale your networks.

MATERIAL AND METHODS

The Google Cloud is made up of a variety of physical resources, including computers and hard drives, as well as virtual resources, including virtual machines (VMs), that are housed in Google's data centres all around the world. A region is where each data centre is located. There are regions available in North America, South America, Australia, Asia, and Europe. Each area consists of a number of zones that are isolated from one another. Each zone has a name that combines the region's name with a letter identification. Asia-east1-a, for instance, is the designation of zone A in the East Asia area.

In addition to redundancy in case of failure and lower latency due to placing resources close to clients, this resource distribution offers a number of advantages. Additionally, this release presents a few guidelines for combining resources.

RESULTS AND DISCUSSION

Things I have learned in this program includes :-

Cloud infrastructure

Implement, deploy, migrate, and maintain applications on cloud infrastructure.

Application development

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CONCLUSION AND RECOMMENDATIONS

A combination of dependable infrastructure and distinctive value-added solutions, including Spanner, Pub/Sub, and Global Load Balancing, make up Google Cloud's attractive offering. They were able to gain knowledge from both AWS's successes and failures. Their goods are easy to comprehend and work nicely together. The disadvantage of Google's more methodical strategy is that it occasionally feels as though AWS is not just ahead of GCP but also moving further away. I'm hoping that Google Cloud Next will provide more parity between its offerings and those of AWS.

I advise businesses to look into Google Cloud if they don't want to spend a lot of time learning about and navigating AWS's intricacies. Even if I had to choose again, I would happily go with Google Cloud.

REFERENCES

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