
# Cloud Service Selection Using Machine Learning

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## Abstract

Cloud computing (CC) has recently been receiving tremendous attention from the IT trade and educational researchers. CC leverages its distinctive services to cloud customers in a very pay-as-you-go, anytime and anyplace manner. As well as Cloud services offer dynamically scalable services on demand. Therefore, service supplying plays a key role in CC. Specially, Customer must be able to select appropriate cloud service according to their needs and money. It is time-consuming task for consumers to collect the necessary information and analyze from all cloud service providers to make right decision. As well as it is also a highly demanding task from a computational perspective because multiple consumers who have similar requirements conduct same computations repeatedly. For solving the cloud service selection problem, many researchers have proposed some approaches including multicriteria decision analysis (MCDA) and Brokerage-Based Approach. But we cannot see any machine learning prediction system for solving this issue. This system enables the user to choose from among a number of available choices. In this paper, we make a neural network with TensorFlow to service selection in CC. This system focuses on three main players in CC. There are Amazon Web Services, Microsoft Azure and Google Cloud Platform in the race for cloud services providers. I identify and synthesize several products relevant for web services in Cloud providers. There are Featured, Compute, Storage, Database, Networking, Operation, Identity & Access and Cost.

They provide all products you might need for moving your business to the cloud. But these product offerings differ in pricing as well as the naming of their services. Some Businessmen already may use on-premise infrastructure or think which infrastructure will use for my project. They may have more complex problems like how to choose a cloud service, which services want use and specially how many costs want to pay for monthly or yearly. Sometimes, someone already use a cloud services, they have lot of problems like more expensive, less flexibility, hard to use, overwhelming options of services, poor management of GUI and tool, complex price schema and other issues. However, they must spend more price and time as useless. Because they could not select best cloud service provider early to their business. Small companies or individuals do not have the software architect or experienced software engineers. Thus, some businesses may break, get low profits, and spend more costs without using all provided benefits too.

Therefore, a systematic solution will be developed to predict which cloud service use for your project powered by Artificial Intelligence. Predict which service provider is good, and cost prediction. In addition special thing is minimizing your cost according your web project (Java, Python, C++, Angular and React) that will be given through the system and we highlight several services (Region, Compute, Storage, Database, Networking, Operation, Identity & Access and Pricing Model). You want to use for minimizing cost. The main end user of the system is data of these cloud service providers. As well as You can know which cost usage might be able to spend weekly, monthly or yearly according to web traffic for your projects. The other indirect end users are software architects, the employees of web development and expert web freelancers. We prove the effectiveness and efficiency of our approach with real and synthetic cloud data.