

# STRUCTURED ABSTRACT

## Context:

The use of cloud computing has greatly expanded access to high-performance computing resources for businesses and researchers, allowing them to avoid large upfront investments and instead pay for usage on an as-needed basis. However, proper resource management can still lead to significant cost savings.

## Objective:

The objective of this study is to optimize resource allocation in order to minimize costs without compromising performance.

## Method:

To accomplish this, the analysis was conducted using the Python programming language and relevant packages such as matplotlib and seaborn. An agile process was employed, with multiple iterations to ensure the reliability of the results.

## Results:

The study found that allocating high-end GPUs for rendering events and mid to lower-tier GPUs for other tasks can lead to reduced costs and improved performance. Furthermore, areas with more complex structures, such as buildings and streets, require more resources to render and should be considered when allocating resources.

## Novelty:

Previous publications in this field have largely focused on architectural solutions and reducing power consumption. This study offers a novel approach by focusing on reducing costs while maintaining performance through effective resource management.

## 1 Picture that depicts 1000 words:

Below is the pair plot of averaged data to see the relationship between various GPU conditions.

Fig 1: Pair Plot of GPU Conditions

