Structured Abstract

Context

Cloud computing is definitely making an impact in today's world by allowing businesses and researchers to have access to flagship-level compute power without having to invest huge amount upfront and by just paying as per usage. However, this amount can still be reduced with proper resource management.

Objective

The main of goal this analysis is to allocate the right resources to the appropriate task so that cost of operation can be reduced.

Method

To carry out this analysis, python as a language and some of its packages like matplotlib and seaborn were used. The agile process(the whole process was done into multiple iterations) was used to make sure the results are reliable.

Results

High-end GPUs can be allocated to rendering events as most of the computation time is being taken by them and mid to lower tier GPUs can handle other events this way tasks can be done in a desirable time with reduced cost. Also, areas with more buildings and streets take more render time as compared to areas with the plain ground, hence, resources can be allocated accordingly.

Novelty

Previous publications mainly focused on various architectures that can be used and how to reduce the power draw. However, the aim of this analysis is to reduce the cost spent on cloud resources without having to take a hit on performance.

Fig 9: Heatmap of Newcastle Upon Tyne