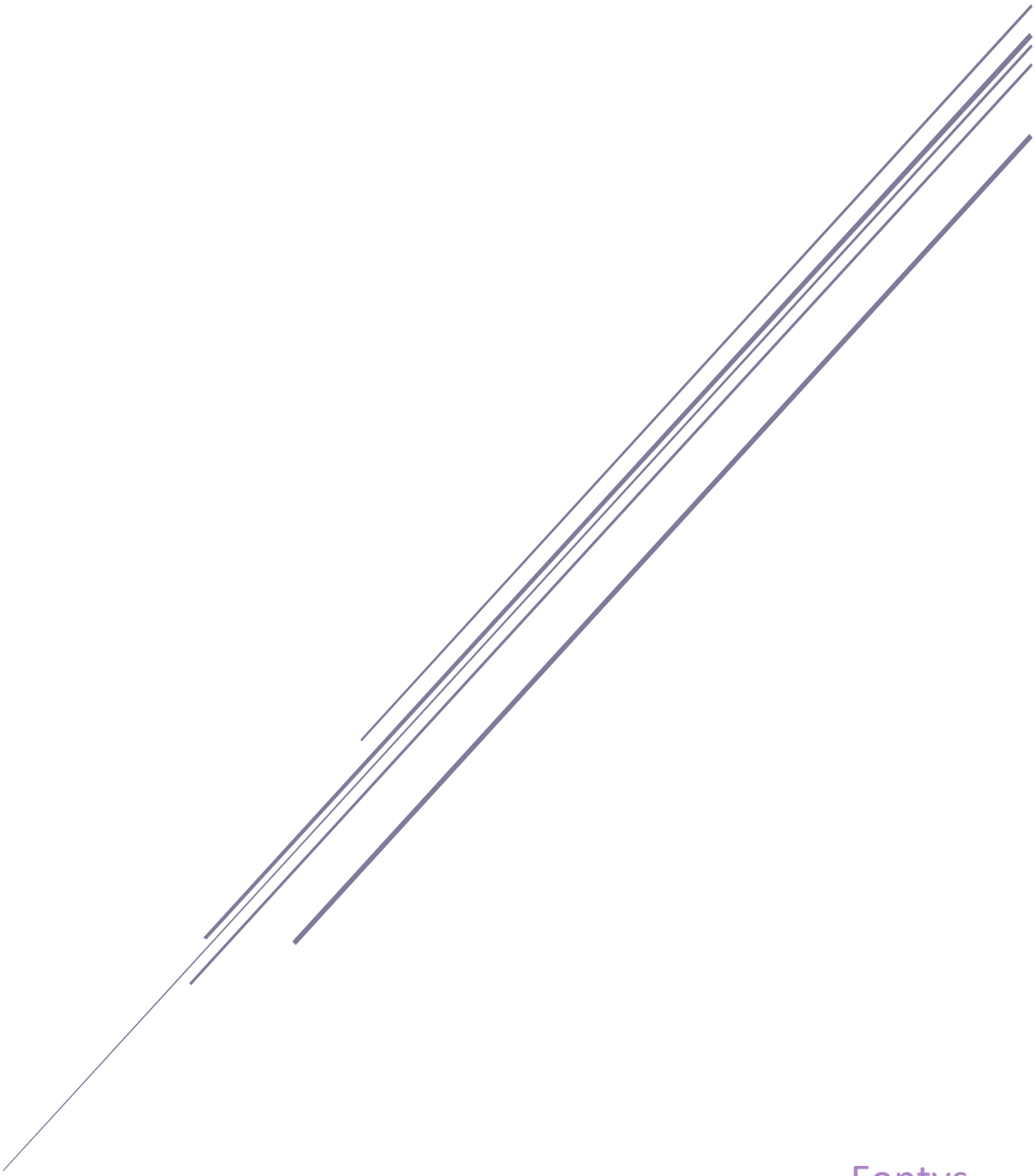
CLOUD

Reasoning, Conclusions & Recommendations



Fontys

HBO ICT

OPENING

In this document I will explain why I made certain decisions in my implementations and why I did not go for a different approach. The topics that we will be going over are Cloud Services

CHALLENGE

Water polo is a niche sport in the Netherlands. Unlike football, hockey, or tennis where each town might have one club of the three sports and big cities might have multiple within the same sport. This results in clubs easily finding opponents to play practice matches outside the main competition. Water polo on the other hand besides having a smaller group of athletes also has the problem that it is restricted to towns and cities with a swimming pool which is also competition approved. This combination leads to difficulty finding practice matches, the idea for this project is an integrated system where teams can find each other to play practice matches, contact each other, find relevant personnel like referees, keep track of matches themselves and create an environment which promotes competitive play among the regions.

REASONING

For this project I could have chosen several different cloud services, from storage and analyses to logging and monitoring or container orchestration. Furthermore, besides choices in application there is also the question about the different vendors. For this project this project I used google cloud storage to manage data.

Data management and storage is important part of developing ML algorithms and being able to access data from multiple points without creating my own database server helps in this process. It also brings benefits such as automated backup system and is likely more secure than a solution I would be able to create.

Why use Google over other vendors like AWS. Even though AWS has benefits like it having more options and services by default. Google Cloud has benefits which AWS doesn’t provide. Google Colaboratory is a cloud solution to sharing ML models in the form of notebooks like Jupyter Notebooks. Without needing to use your own GPU resources you can train models and export these for deployment. Within Google Colab is a built-in connection with Google Drive and Google Cloud Storage making it both more cost efficient as performance efficient to use Google Cloud for managing data storage.

Lastly Spring Boot Security has been updated in the past years to combine multiple packages with features such OAuth2 allowing for an easy rollout of cloud services within a Java application.

CONCLUSION & RECOMMENDATIONS

During my project I made use of cloud services to enhance another part of my project making it easier and more cost efficient to run a system through a cloud service rather than creating my own solution.

In my case I had the circumstance where I wanted to research AI and ML models for my individual research project as a result, I found a great use case for a cloud solution within my project. However, before I was busy doing said research, I struggled to find a good solution which didn't just feel put in for the sake of being in the project. The other solution I want to try if I had more time is exploring the cloud deployment of projects.