

Design Statement

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December 15, 2017

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1 Requirements

The application proposed in this report would be best utilised on multiple platforms & devices, as the service it would offer is platform-independent (i.e. all you need is an image file). For this reason the primary focus will be making an online web-app, which connects to a separate REST (Fielding & Taylor 2000) API which performs the main functions of the application, without the clutter of the front-end mixing in with it. This would also allow other apps and services to utilise this API and integrate it with other apps, such as on social media apps when sharing an image.

When designing a user-facing website and an API, there are certain considerations that have to be met, such as data security and ease of use. The following features define what the final product should achieve:

- A web-based user interface.
- A user-history (metadata) tracking mechanism.
- A RESTful API which can be utilised by any application.

Following these features, these are some of the things that should be taken into consideration when implementing these features:

- The application & API should be able to handle a high-volume amount of users.
- It should not store any more information about users than it has to.
- It should make this data available at a users request.

- It should maintain a reasonable level of security to prevent user-data from being stolen.
- It should not store any user images after the user has finished using the application.

2 Technologies

2.1 Front-end

2.1.1 Angular JS

2.2 Back-end (Python)

2.2.1 Django

2.3 API (Python)

2.3.1 Flask

2.4 Deployment - AWS

Fig. 1 defines the component layout for the entire workflow of the application proposed in this report.

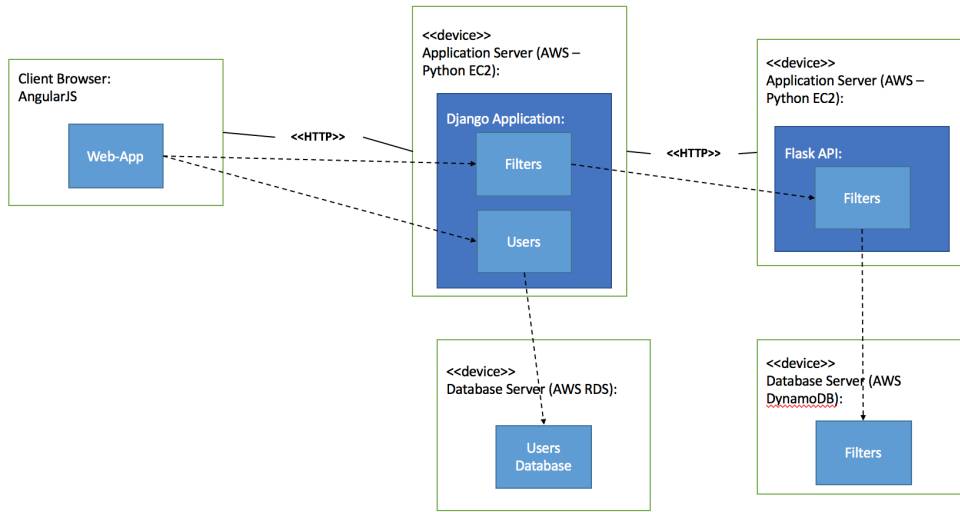


Figure 1: Component deployment diagram

References

Fielding, R. T. & Taylor, R. N. (2000), *Architectural styles and the design of network-based software architectures*, University of California, Irvine Doctoral dissertation.