

Postgraduate student: **Stergiani Eleutheriou**

Thesis Title:

Design and development of a mobile app for the quick and sufficient information retrieval for the human genes

Abstract

Many important data in current biological science comprise hundreds, or even thousands of individual results. Due to the existence of these massive data there is the requirement of more computational tools to navigate in this ocean of data and effectively interact with the content. Mobile devices are an increasingly important tool in the everyday lives of scientists and non-scientists alike. Their advanced hardware and software, as well as their portability, make scientists capable of interacting with complex data at meetings or other locations remote from their main computing environment. This study is about the development of a biological mobile application, for both IOS and android platforms. In particular, the users of this application can look up any human gene commonly referenced in biological publications and databases, and find information about its description summary, the drugs that it is associated with as well as all its functional annotations and diseases. The challenge in this application's development was to manage a balance between storing content locally within the app vs. obtaining it dynamically via a network connection. This was succeeded with the construction of an administrative site where new data are curated and synchronized with the application.

SUBJECT AREA: Computational Biology

KEYWORDS: genes, proteins, drugs, diseases, mobile applications, bioinformatics

Examining Committee

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