

2 Abstract

The efforts to process biological data has been really fascinating as the power of computational devices has increased tremendously. One of the major computational platforms in biological data is tranSMART. "TranSMART is an emerging global open source public private partnership community developing a comprehensive informatics-based analysis and data-sharing cloud platform for clinical and translational research." TranSMART is very simple to use web application and it processes biological data really efficiently, however its power is not available to use from any mobile application. Thanks to the recently developed RESTful API it could be really easy to integrate with other applications. The goal of the project is developing a mobile interface in Android for tranSMART. TranSMART could run from multiple hosts within an organization, so the mobile application gives the flexibility of choosing the desired host and storing their addresses for future use. Also this mobile application implements the same search interface available on the web in a more user friendly way through optimizing auto completion of search terms. The screens displaying the results of the RESTful calls are optimized as well to display the key details of each biological experiment by showing experiment descriptions and biological information. This application brings the power of tranSMART Big Data platform closer to the user, through allowing flexibly in choosing different hosts where tranSMART could be running from, facilitating the search screen for a mobile device and adjusting the results in a more responsive way.

3 Introduction

Mobile Applications have been gaining popularity very rapidly because they make our life so much easier by providing a quick and convenient gateway to information. Many of these Mobile Applications serve as interfaces to very powerful web applications such as Dropbox, Facebook, YouTube and Twitter. They bring to the users the power of these cloud platforms. "TranSMART is a Web-based knowledge