METU, Department of Computer Engineering
Graduation Project
Proposal Form

Project Information

Title

QuoteShot

Target

Public[ ]   Restricted [X]

Proposer Information

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The project is a mobile application where people can share their favourite lines from books they read by taking photos and specifying the lines they are interested in. Those lines are recognized by optical character recognition algorithms and, tags related with the book are automatically generated. The most popular books are listed periodically, based on the quotes shared by the users. There are some applications to share quotes but differently from them, in our application, the aim is to create a new social platform and bring together the people with similar interests.

Users can hold a list of the books they have, and turn on an exchange option for the books they have in the list to make them available for exchange. For books they put on their exchange list, they can either create a list of the books they desire in exchange for it, or consider other offers from the users interested. Upon creation of the exchange list, the GPS information of the owner user will be seen only by the application/server side and will not be seen by the other users. Users can determine the size of the area they can wish. The users desiring a book which the owner has will only see the username of the owner if they are in a proper area (close enough to the owner) and can contact with them for the transaction details.

Similar Products/Projects

The applications related with books are as follows:

Satır Edebiyatı(in Apple App Store): Users can choose a quote in this app where there is a "limited" range of authors, and quotes from their books, and share it on other social platforms such as Facebook, etc.

Goodreads(in Apple App Store and Google Play Store): Users can set a goal on how many books they will read, or share which/how many books they have read. Books can be also rated.

Quote Snap(in Apple App Store): Very similar to the "Notes" built-in application in iPhones, this app can save any text you choose.

Justification of the Proposal

The purpose of the project is to create a platform for people who love sharing the parts of books which they liked, motivating other people around them to read books.

The lists generated by people's "real" interests also reveal the actual popularity of the books. Hence a more realistic top list in a specific category is created for a person who is in search of a new book.

This application is not intended to be a solution of any problem as it is a social application mainly to be used by book readers.

Contributions, Innovation and Originality Aspects of the Project

The originality is that this project aims to create a platform focusing on people who occasionally read books and create a trend on books where the top list does not depend on the sales of the books but on the popularity, brought by the people of similar interests.

Innovation is, in the project, the specific lines of a book(novel, poem, etc.) the reader specifies after taking a snapshot of the page can be **optically recognized** (OCR), and these lines in text-form can be shared by the reader.

Different from other apps, users can freely share any part of the book they read in ease, by either taking the snapshot of the page, or using the text converted from the part they desire in that specific page snapshot. Users can reach the history of the quotes they shared, in their profiles created in this platform. Additionally, the words recognized from the quote of a user are processed through a mechanism to bring out which types of books they are interested in, which would also generate book(and/or quote) recommendations only for that user.

People can share their quotations as a text, exchange book in the area which is determined by themselves and reach the most popular books which are determined by users shares. These are the advantages of the application.

Based on the book recommendation people of similar interests who are at the same local area can be provided a book exchange service.

Web Crawling: The platform will have a crawler which will crawl the books and after that, books will be categorized (fantastic, fiction, scientific etc.) using machine learning techniques. Crawler will keep working to update platform's database for new books, novels etc.

Optical Character Recognition(OCR): When people share the selected part of the book, our application generates the related text-form of that part by using OCR and enables user to share this text through other platforms such as Facebook, Twitter, etc.

Deep-learning (NLP): The words recognized from the quote of a user are processed through a mechanism to bring out which types of books they are interested in, which would also generate book(and/or quote) recommendations only for that user. To do this, we will create a dataset of quotes and books from the web and use the techniques from the Learning to Recommend Quotes for Writing paper.

Database creation: To store user profiles, books, authors and rating data,we will begin with creating a secure and reliable database. While sharing the favorite parts of the book, user should select the author and book name so we need an advanced database to hold this information.

GPS: The book exchange service will use GPS technology to match people locally close to each other.

The product is a mobile application of social platform dedicated to people who read book and can be installed on any mobile device. As a start off, the project will be developed for Android devices.

The accurate conversion of text specified by the user in their snapshot of the page is one performance measure.

Accessibility of the desired author and book during the publication should be provided by database.

The end-product appeals to any individual who can read a book.

Project Development Environment

• The project can be implemented by using any development environment that can produce an output suitable for mobile devices such as Android Studio for Android version, and Visual Studio 2015 for iOS version. Other requirements:

• Library: OpenCV can be used as a library for various image processing, pattern recognition, and classification tasks.

• Programming language: mostly Java, Objective C and Swift.

External Support

 No external support will be required for this project.

References

Satır Edebiyatı, https://itunes.apple.com/tr/app/sat-r-edebiyat/id833496531?mt=8
QuoteSnap,
https://itunes.apple.com/us/app/quote-snap-saving-sharing/id974914836?mt=8
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