

POCKET USA

EXECUTIVE SUMMARY

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Pocket USA is a simple to use app that allows users to explore public data based on locations whenever they have their iPhone with them. If you feel you know too little about the city you lived in; if you want a quick fact-check for your friend's argument; or just feeling bored on the bus and need a time killer. This is a perfect app for you.

This app fits into the App Store landscape nicely as it provides a unique value to a certain group of people, and there is no similar app in the App Store per my observation. Because the app is designed to be light and simple to use. I guess user would keep it on their phone as a tool whenever they need it, and maybe become one of the least to be deleted when the user is cleaning his/her phone in situations such as low storage space.

Below is a summary of functionalities:

- Check the median population, median household income, and median age for a location within the United States.
- Compare the median property value, median household income, and median age of a location with its parent locations. For example, when you search for a city, it will list the data for the US, parent State, and parent Country.
- Present above data in bar charts for easier comparison, the bar chart will change dynamically to fit the data.
- Search for any location, the possible matches for the search term will be presented dynamically.
- Provide the source of data.
- A splash screen presents the name and the developer of the app.
- In the case of network issue, a message will appear to inform the user.
- An alert of simple instruction will be displayed after splash screen.
- A 'Map' button to present the searched location in Apple's map app.
- A 'Glance' button to present some photos of the searched location.
- A bookmark option on each card.
- A hamburger menu contains Home, Bookmarks, and Settings.
- Swipe gestures are recognized to navigate between screens and reveal hamburger menu.
- A bookmark screen that list all your bookmarked cards, and present the data directly in the table cell.
- Bookmark button can be tapped to un-bookmark a card in both main screen and bookmark screen.
- A placeholder screen with bookmark instruction on the bookmark screen (when you have no bookmark).
- A setting screen that provides an option to clear all your bookmarks when possible.
- Bookmark will be stored between sessions.

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- A companion administrative app that allows developer to send an instant notification to all users.

Below is a high-level of technical details:

- The data is collected by making API calls to www.datausa.io. The API returns a JSON file based on the search term given. The JSON is then parsed to fill the variables or used to determine if further API calls are required.
- The charts are created on layers with paths and animations. A calculation is applied before drawing the charts to determine the appropriate bar length, width, spacing, color and so on.
- The charts are then placed on a scroll view without showing the scroll bar to simulate card UI.
- The bookmarks are saved in the userdefaults with its information type and query terms.
- The bookmarks are placed within a UITableView where the most recent bookmark will be displayed first.
- To
- Instead of buttons, gesture recognizers are used to navigate between screens and reveal hamburger menu.
- The hamburger menu is implemented with framework SWRevealViewController (<https://github.com/John-Lluch/SWRevealViewController>).
- The random color for some UILabels is implemented with framework Chameleon (<https://github.com/ViccAlexander/Chameleon>).
- The notification sent from administrative app is implemented with CloudKit. Administrative app will post the title and body of notification by creating a AdministrativeNotification in CloudKit, and user will receive a silent notification once the record is posted.