

Better Bookmarks Release Plan

Better Bookmarks

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Better Bookmarks version 1.0.3.0

Release date: July 23, 2019

Revision Number: 3

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High Level Goals

- Create a user-friendly GUI that will help users find their favorite web pages easier.
- Allow users to click a button and organize their bookmarks into folders with predefined categories.
- Have our Chrome add-on available for users to download in the Chrome web store.
- Learn how to effectively work together on a software team by using agile and scrum.
- Organize our code and architecture to allow continuous integration.
- Collect user data and use it to continually improve our machine learning models so users experience improves over time.

User Stories for release

Sprint 1

User Stories

- As a user, I would like my bookmarks to be sorted automatically (with minimal input on my part) so that my only job is clicking a bookmark button.
- As a Chrome user, I am interested in implementation into the browser so that I know the application is automatically running when necessary.

ML Tasks:

- Source a suitable dataset for URL categorization.
- Find or train the initial ML model.
- Clean/preprocess the dmoz.csv
- Research URL categorization & NLP

Web Dev Tasks:

- Make a basic Chrome extension capable of accessing/modifying a users bookmarks.
- Create a directory structure for our extension
- Research how to obtain title and description data from a web page.
- Figure out how to publish extension to the web store.

Spikes

- Learn how to do automated testing, prototyping, and how to organize our code to allow continuous integration.

ML Spikes:

- Learn how to do inference in the browser.

Web Dev Spikes:

- Learn javascript.
- Learn how to make a chrome extension.
- Learn how to use the chrome.bookmark API to manipulate a user's bookmarks.

Infrastructure

- Set up our git repository
- Install all the necessary software dependencies.
- Get a Google account with a lot of bookmarks to serve as a test user.

Sprint 2

User Stories

- As a user I would like to download the app from the Chrome Web Store so that I can have it as an extension.
- As a user, I would like the sorting structure to be hierarchical so that my bookmarks are further sorted into subcategories.

Tasks:

- Wrap up all of this functionality into a single working Chrome extension.

ML Tasks:

- Communicate the cluster information to the web dev team.
- Find or train the initial ML model.
- Look into online text preprocessing libraries.
- Import Keras model into TF.js.
- Find worst performing categories and remove or retrain them.

Web Dev Tasks:

- Take the hierarchy information from the ML model and put the bookmarks into a corresponding folder structure.
- Make GUI for displaying bookmarks and folders.
- Grab the page title and description using tabs API, storage API, and content scripts.
- Make a modal GUI popup when the user clicks 'New Bookmark'.
- 'Create' button saves a bookmark to the bookmarks tab

Spikes

Web Dev Spikes:

- Learn how to get our application into the Chrome Web Store

ML Spikes:

- Learn how to do hierarchical clustering.

Infrastructure

- Set up a fresh developer account from which we can work on publishing.

Sprint 3

User Stories

- As a frequent bookmarker I would like a working Chrome extension that stores my bookmarks for me, displays them, allows me to add new bookmarks, and delete bookmarks I no longer need.
- As a disorganized bookmarker, I want a bookmark category recommended to me when I add a new bookmark so I can stay organized.
- As a user with many bookmarks, I want to be able to locate a specific one I remember very fast.

Tasks:

- Make icons for a GUI.
- Write and adhere to style guidelines.
- Publish the extension to the Web Store.
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ML Tasks:

- Retrain the 5 category model on titles to get higher performance.
- Modify the predictCategory() function to use the newly trained title model as well if the website only has the title and not the description.

Web Dev Tasks:

- Have the extension create the necessary folders upon install(3)
- Make grabbed description be the description of the current page(2)
- Save the bookmark when they click add-bookmark(2)
- Complete javascript prediction code for final presentation(1)
- Create search functionality and GUI for it(4)
- Allow users to delete a bookmark(3)
- Allow users to move bookmarks to different folders(3)
- Allow users to delete folders(3)
- Allow users to move folders(3)
- Allow users to create a new folder(3)

Spikes

Web Dev

- Learn a web dev software stack like MEAN.

ML People

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Infrastructure

- GIMP for creating the icons.

Product backlog

- Let users delete folders and bookmarks from the GUI.
- Let users move folders and bookmarks from the GUI.
- Let users move bookmarks between folders in the GUI.
- Let users create their own categories
- Making the chrome add-on mobile friendly
- Multi Language support
- Open sourcing our project
- Expanding our idea to desktop file organization