Bike Checkup

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Image sources: https://www.vectorstock.com/royalty-free-vector/bicycle-bike-repair-service-icon-linear-on-white-vector-23097738, https://www.stickybottle.com/latest-news/council-uses-cyclists-own-strava-file-speeds-to-ban-them-from-popular-route/

Project Idea

- Problem
  - Many cyclists are aware of the importance of keeping their bike in good shape for riding. However, without software, it is difficult to keep track of bike/parts usage and is time-consuming to update maintenance history lists.
- Solution
  - The app Bike Checkup will make the above tasks easier by providing a secure place to keep track of bikes and their components, as well as create a bike maintenance schedule.
- Target audience
  - As a triathlete who maintains my own bikes, this is an app I have been wanting to develop for myself for a while and can therefore attest to the market for an app like this.
  - I can also see this app adding value for any cyclist interested in the health and safety of their own bike, especially those who maintain their bike themselves.

Use-Cases and Requirements

- 3 main use-cases:
  1. Strava authentication: Using the Strava API, the user will authenticate with their Strava account to allow for profile data access.
  2. Strava polling: Using the Strava API, the app will poll for bike odometer data from the user's Strava account for use in maintenance schedule calculations. Non-trivial logic will be involved in implementing the loading animation that will be present during polling.
  3. Maintenance notifications: According to the user's set maintenance schedule, the user will receive real-time notifications whenever a maintenance task is due.
- Other important use-cases:
  - Maintenance schedule setup: The user will be able to set up a custom maintenance schedule to include the specific recurring tasks they want to be reminded of, as well which measurement they would like their notifications to be based off of, either elapsed time, elapsed riding distance, or a provided "expert recommendation".
  - Task completion: Scheduled or not, the user can log completed maintenance tasks into the app, which are archived for future reference.
- Non-functional requirements:
  - Security: Strava authentication is done in a safe way, without disclosing any personal user information.
  - Usability: App design takes accessibility into account by having adequate contrast and size of text and buttons in the user interface.
  - Reusability: App code should be organized and written in a modularized, well thought-out way so that functionality can easily be extended in the future.

Team Formation

- Check out my LinkedIn for my past experiences, including 2 internships at Microsoft.
- I have more experience in and enjoy front-end development the most, but am really looking to get more back-end and full-stack experience and skills out of this course.
- I am in Vancouver this term taking classes full-time and if working with anyone else local I would love to work on the project together in-person in a safe way, however I am also up to work with others in other locations.
- I'm hoping to work with teammates who are also fairly experienced so we can learn lots from each other throughout the entire development process.
- Best ways to contact me are on Facebook or via email.