Lean Analytics for a Leaner Person

Demo #1 – Team Contribution Breakdown

Fall 2015, Group #8 – Information & Members

Project Repository @ Github – Health Analytics
Project journal – http://blog.willkara.com
Website Homepage – http://willkara.com/projects/HealthAnalytics/index.html
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Contribution Notes:

Listed below are the contributions each member was responsible for in demo #1. We broke down the contributions per team member and followed the items presented in the grading format posted on the professor's website.

For this demo we did not do integration or integration testing as most of our focus was on finding data, choosing a prediction algorithm, domain-specific research, implementing the model, and getting the user interfaces done early on (as these tend to take time). There was testing done on the modules created, but it mostly was manual testing (similar to unit testing). As per the feedback received, a more thorough testing (especially for the model) will be done for the next demo.

Data collection in our project is two-fold, but should be explained so the contributions are understood. First, the data used for creating our initial model was from the CDC; this data was found after researching and had to be extracted, cleaned, filtered and ingested. Second, our system allows users to interact with it (via mobile app and website) and they will enter data using the interfaces. This second method of collection is part of the function requirements and is supported by the rest of the system.

Finally, our sub-group breakdown. Our team is broken down into three main sub-groups, with a main person responsible and other members for support in specific areas, the table below shows this responsibility.

Table 1 - Sub-group Breakdown

Sub Group	Responsibilities
Manuel Maldonado	Mobile Application, Project Management
Ming Tai Ha & Nick Taylor	Health Model and Datastore
William Karavites &Tongpeng Zhang	Website and Processor

Table 2 - Sub-system/Module Responsibility Breakdown

Module	Responsible
Mobile Application	Manuel
Website	William, Tongpeng.
Processor	William, Tongpeng. (Manuel/Nick will assist)
Data-store	Nick. (All others will assist).
Database	Nick.
Health Model	Ming. (Manuel will assist).
Project Management	Manuel. (All others will assist).
Documentation	Whole team.

Contributions by Member:

- **Manuel Maldonado:**
  - Program Code:
    - Mobile Application Design – Designed the different views for our mobile application (Log in, Registration, Profile, Add Workout, View Workout History, Add Food, View Food History and Settings).
    - Mobile Application – Wrote mobile application for iOS and Android, several views/pages and ready for integration with Processor (server) and integration testing.
  - Cross-Platform Issues:
    - Mobile Application – as part of the implementation, worked on finding a framework that would help developing for both iOS and Android, this was found (Ionic Framework) and it is being used, the application works on both platforms.
  - Testing:
    - Mobile Application – manual testing of using simulators and real devices for iOS and Android (one simulator and one real device for each platform).
  - Documentation:
    - Wrote README file with instructions on how to build and run the Mobile Application.
  - Brochure:
    - Provided mobile application screens for the brochure.
  - Slides Preparation:
    - Did final formatting and review of contents for the Demo#1 slides.
  - Project Management:
    - Helped organize meetings.
    - Helped with report formatting.
    - Helped coordinating activities.
    - Helps combining contributions into the correct files, formats and submit them.

- **Ming Tai Ha:**
  - Program Code:
    - Health Model – Designed and chose final approach (Regression Tree) for our predictive Health Model.
    - Health Model – Implemented the regression tree algorithm (seen in the demo) using python.
  - Testing:
    - Health Model – Tested for model accuracy using a subset of the data not used in the model generation process.
  - Documentation:
    - Wrote README file with instructions on how to configure the environment, install dependencies, and run the Health Model.

- Data Collection:
  - CDC Data – Implemented data ingestion as well as final clean-up and filtering before used in the model generation process.
  - Health Model Data – Implemented algorithm to export the Health Model in JSON format to a flat file that will be used by the Datastore to store it into our database.
- Brochure:
  - Final formatting.
- Slides Preparation:
  - Provided content for slides (specifically for the Health Model and CDC Data).
- Project Management:
  - Helped organize meetings.
  - Helped coordinating activities.
  - Helped with keeping team on track.
- Other:
  - Scientific research, extending our domain specific knowledge that aids the model-generation and validation.

- **Nick Taylor:**
  - Database:
    - Datastore – Designed and documented (as part of the reports) the database abstraction layer (we call the Datastore).
    - Database – Created preliminary table designs for user-generated data, this includes user profile information, user activities (workouts and food).
  - Data Collection:
    - CDC Data – Found relevant CDC dataset, manually extracted the data (it was originally in a SAS data set) and did preliminary filtering of fields that were empty or not needed in the model.
  - Brochure:
    - Provided some of the content for the brochure.
  - Slides Preparation:
    - Provided content for slides (specifically for the Datastore and CDC Data).

- **Tongpeng Zhang:**
  - Program Code:
    - Processor Design – Designed how the processor will work (as part of the reports, which include sequence diagrams, etc.).
    - Website – Helped in adding content (by writing HTML) for the website.
  - Testing:
    - Website – manual testing of website user interface. Done by browsing to the website and ensuring features work.
  - Brochure:

        - Provided majority of the content for the brochure as well as initial formatting.
    - Slides Preparation:
        - Initial formatting and provided content for the Processor.

- **William Karavites:**
    - Program Code:
        - Website Design – Designed the different views for our website (Landing page, View Activity, About, Sign Up, Sign In, View Activity History, Export data and Community Data).
        - Website – Wrote many of the website's several views/pages.
    - Testing:
        - Website – manual testing of website using three major browsers (Chrome, Firefox and Safari).
    - Brochure:
        - Provided website screens for the brochure and helped with final formatting.
    - Slides Preparation:
        - Provided information for the Website slide.
    - Project Management:
        - Helped with report formatting.
        - Helps combining contributions into the correct files, formats and submit them.
        - Runs the team's blog/website.
        - Owns the team's GitHub repository
        - Created the team's OneDrive shared storage.