

EE/CprE/SE 491 BI-WEEKLY REPORT 5

10/12/2020 - 10/26/2020

Group number:

29

Project title:

Microbiology Lab Information Management and Visualization System

Client &/Advisor:

Karrie Daniels & Thomas Daniels

Team Members/Role:

Brittany McPeek — Report/Documentation Manager

Benjamin Vogel — Team Manager

Rob Reinhard — Meeting facilitator

Kyle Gansen — Meeting Scribe

Ben Alexander — Progress Manager

Samuel Jungman — Chief Engineer

Weekly Summary

These past two weeks, we have been able to focus our efforts on putting together our individual components to make one cohesive project. Our application can now create new and different projects - as well as save information about those projects to be opened later. Additionally, in regards to the actual graphing, the user can change the colors the graph uses, as well as the marker symbols. The Google Drive Interface is also now linked to the GUI, so the generated graphs can be exported.

Past week accomplishments

Brittany McPeek — Report/Documentation Manager

- Finished up the data point shape customization functionality
 - User can make their own data point shape schemes to use for their graphs
 - Saves previous data point shape schemes the user has made
- Added the Google Export functionality to the GUI
 - Users can select exactly which files they want to export
 - Users can select which google drive account they want to use (as well as add another account etc...)
 - Users can export the selected files to the selected folder to the selected Google Drive Account
- Added the color and shape customization functionality to the GUI
 - The colors and shapes used on the generated graphs reflect what the user has selected in the settings

Benjamin Vogel — Team Manager

- Continued work on saving/loading config dictionaries
- Attempted to diagnose issues with CI/CD pipeline
- Acted as advisor with Rob and his work

Rob Reinhard — Meeting facilitator

- Implemented New Project Button
- Implemented Open Project, Loading in of Projects
- Created Project Data Structure and Pickle File
- Linked Project View to Graph Creation View
- Created Unified Menu Bar
- Created data graph folder structure in project
- Implemented file import to project
- Implemented add revision to workbook
- Implemented pickle graph files generating images on the fly
- Updated Graph generation file to select workbook, edition from dropdown.
- Met with Kyle and Ben to discuss data pickle files. Met with Samuel to assist in project exploration

Kyle Gansen — Meeting Scribe

- Worked with Rob on project creation and opening
- Worked with Sam on integrating t-test into project
- Data is saved to a pickle when it is imported to speed up reading of data
 - Data importation spawns a new thread

Ben Alexander — Progress Manager

- Pickle files are created upon graph generation
- When pickles are clicked, a single png file is overwritten which shows the graph
- Changed pickle file to store reference to data frame instead of the data frame itself to save space

Samuel Jungman — Chief Engineer

- Stat data generation is integrated with the UI with the help of Kyle Gansen
- First version of the data import cleanup is implemented and pending code review

Pending issues

Brittany McPeck — Report/Documentation Manager

- Current comments and documentation needs to be cleaned up

Benjamin Vogel — Team Manager

- Had to assist family over weekend, diverted hours away from working on the project

Rob Reinhard — Meeting facilitator

- Small error with, on project with no file imports, the graph display showing the root directory.

Kyle Gansen — Meeting Scribe

- When importing a file, a bug occurs if the file has already been imported. Will add in a check for this.

Ben Alexander — Progress Manager

- I found an issue with making bar graphs, it doesn't work. Me or someone else should look into it this week

Samuel Jungman — Chief Engineer

- Need to test and finish integrating the data import cleanup
- Found an error where attempting to load project without any project selected or available crashes the program

Individual contributions

Team Member	Contribution	Weekly Hours	Total Hours
Brittany McPeck	Connected the graph settings and export features to the GUI and generated graph functionality	12	62
Benjamin Vogel	Saving/loading config dictionaries, CI/CD pipeline, advisor with Rob and his work	11	54
Rob Reinhard	Loads in projects, add new project, open project, link between project and graph view, unified menu bar, data storing implemented, file import implemented, pickle files loads in image on fly, add new workbook edition, meetings	22	53
Ben Alexander	Pickle file generation upon graph creation instead of just png files, uses one png file to	8	52

	show graph		
Samuel Jungman	Read through codebase and current documentation to better understand the new file system. Worked with Kyle to fix and integrate the stat analysis methods into the program. Read the documentation surrounding our current dataframe model. Created algorithm to read through and process the data and cleanup whitespace on columns so duplicates are not marked.	21	42
Kyle Gansen	Worked on saved projects and opening existing projects with Rob, stat analysis with Sam, and dataframe pickling to speed of reading of imported data	10	53

Plans for the upcoming week

Brittany McPeck — Report/Documentation Manager

- Export generated graphs to local machine
- Add pop-ups where actions take a relatively long time to complete - so user doesn't think the application is frozen
- Clean up documentation
- Start creating the User Manual

Benjamin Vogel — Team Manager

- Templating
- Fixing CI/CD
- Smoothing out multiple graph generation
- Start work up on final presentation

Rob Reinhard — Meeting facilitator

- Add edit title feature.
- UI Cleanup, as it's getting cluttered.
- Further obfuscation of file system, (tree view doesn't say it's a pickle file, for example)

Kyle Gansen — Meeting Scribe

- Allow user to edit of the list of columns in the checklists in UI
- Add marker and color selection to bar graphs
- Work on fleshing out graph templating options

Ben Alexander — Progress Manager

- Template creation functionality
- Combine work on current branch with Rob's work on redoing the file structure of projects

Samuel Jungman — Chief Engineer

- Extensively test data cleanup algorithm
- Integrate data cleanup algorithm as an automatic part of the import process

Summary of weekly advisor meeting

We held two meetings over the past two weeks. During these meetings we demoed the current version of our application at the time to our technical advisor and client. Our client gave us feedback on the Graphical User Interface layout - she liked having the imported files on the left, the selected variables on the bottom, and the graph preview in the middle. We also asked our client if there were any changes we needed to make. The most notable change was to make sure the user has the ability to select exactly which files to export to Google Drive / Local Machine. Overall, our technical advisor and client were happy with our progress on the project. Additionally, all in all, the meetings held were very productive and allowed us to gain further clarity on our client's needs.