

# EE/CprE/SE 491 BI-WEEKLY REPORT 2

09/01/2020 - 09/14/20

## 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

The overall goal this week was to gain further clarity on our client's requirements as well as to continue working on the base functionalities we need in order to later create more complicated functionalities. These base functionalities included: interfacing with Google Drive, editing data files from the app, graphing box plots, and performing statistical analysis on the data.

## Past week accomplishments

*Brittany McPeek — Report/Documentation Manager*

- Added the ability to create new folders in Google Drive when exporting your graph, and also the ability to save your graph inside a folder in Google Drive.
- Added a function that lists all the folders and files of your current directory in Google Drive when exporting your graph
- Created tests for my Google Drive interface functions
- Began linking the Google Drive functionalities to the GUI
  - Looked into finding a way to display a file explorer that shows the Google Drive contents - this is so the user can pick what folder etc. they want to save their graph in
  - Merged my Google Drive interface into master so that I can cleanly start to work on the GUI aspects
- Performed a code review for Ben Vogel's work before merging to master

*Benjamin Vogel — Team Manager*

- Organized the backlog for our new set of tasks
- Organized and lead meetings for status updates within the team
- Organized meetings with the client and advisor
- Added an integration where a user can edit the data file they want graphed by launching the default application tied to that file extension (i.e., when a person wants to edit an Excel file with their data, it'll launch Excel before returning to the main application)
- Performed a code review for Brittany's work before merging to master

*Rob Reinhard — Meeting facilitator*

- Cleaned up varying pieces from different branches.
- Made progress on Plotly graphing.
- Finishing GUI documentation

*Kyle Gansen — Meeting Scribe*

- Created file tree view for UI that allows user to select files inside UI instead of from file explorer
- Met with team and clients to discuss desired features for program
- Implemented basic variable grouping functionality for bar graphs

*Ben Alexander — Progress Manager*

- Created the UI and graphing functionality for the box plot
- Implemented grid layout from PyQt that enables the graph to adapt to window size
- Created tests for the function I made

*Samuel Jungman — Chief Engineer*

- Finished statistical analysis code
- Created preliminary test cases for stat tests
- Wrote supporting documentation for stat analysis code so it can be added to the gui easier

**Pending issues**

*Brittany McPeck — Report/Documentation Manager*

- No pending issues to report

*Benjamin Vogel — Team Manager*

- No pending issues outside of what's in our backlog

*Rob Reinhard — Meeting facilitator*

- No pending issues to report

*Kyle Gansen — Meeting Scribe*

- No pending issues to report

*Ben Alexander — Progress Manager*

- For some reason, relative paths are not working in my import statements

*Samuel Jungman — Chief Engineer*

- No pending issues to report

### **Individual contributions**

<b>Team Member</b>	<b>Contribution</b>	<b>Weekly Hours</b>	<b>Total Hours</b>
Brittany McPeck	Implemented more Google Drive interface functions and wrote tests for them, began connecting the functions to the GUI	15	21
Benjamin Vogel	Organized meetings (both team and client), Managed backlog and responsibilities, Added launching of default application for data edit	10	16
Ben Alexander	Created box plot UI and graph	4	8
Samuel Jungman	Created statistical analysis code and test cases for it	4.5	9
Kyle Gansen	Created file tree view to select files from in UI rather than from file explorer. Met with clients	10	16
Rob Reinhard	Cleaned up varying pieces from different branches for consistency. Made progress on Plotly graphing. Finishing GUI documentation	4.5	10

## **Plans for the upcoming week**

*Brittany McPeck — Report/Documentation Manager*

- Finish up connecting the Google Drive interface functionality to the GUI
- Look into how we can change the appearance of the graphs (the scaling, colors used, etc...)
  - And then also look into how we can save a template of the appearance so that it's easier for the user to re-make a certain style of graph

*Benjamin Vogel — Team Manager*

- Work as a team to be able to create a large amount of graphs based on a combination of variables and measurements in decent time

*Rob Reinhard — Meeting facilitator*

- Begin working on specialized box and whisker plot
- Work with Benjamin on automatic graph generation
- Continue varying UI parts together.
- Meet to discuss automatic code documentation generation

*Kyle Gansen — Meeting Scribe*

- Further implement grouping functionality for scatter plot and box/whisker plot
- Add group filtering to filter out certain groups
- Allow user to select color of certain groups
- Merge my UI work with Ben's UI work

*Ben Alexander — Progress Manager*

- Get started on the implementation of the scatter plot
- Merge branch with Kyle's to implement the app's navigation

*Samuel Jungman — Chief Engineer*

- Implement stats features into the UI
- Complete testing for features with sample data sets

## **Summary of weekly advisor meeting**

During a meeting with our advisor and client we presented a prototype of our GUI. They looked it over, then at the next meeting we discussed what they liked about the GUI and how we can change it to fit their needs better. Through this, we found that some of our requirements from the previous semester needed to be revised. Specifically, our client would like to be able to create many graphs at one time (by selecting sets of variables and having us create all possible permutations of the sets) in addition to creating a single graph at a time. Overall the meetings we had were very productive and allowed us to gain clarity on our client's needs.