

Angad Bhatti
CS 472 Section 1001
13 September 2023
Git Lab Executive Summary

Overview:

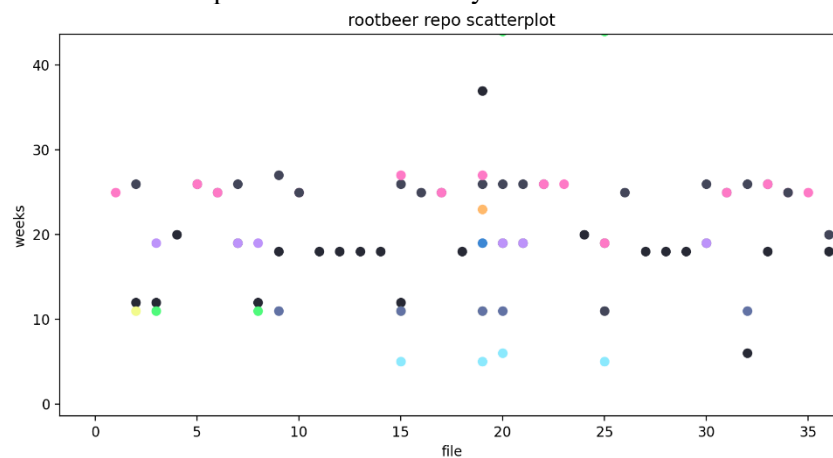
This lab aimed to view the overall structure and developer activities of the [scottyab/rootbeer](https://github.com/scottyab/rootbeer) repository on GitHub. Using scripts `AngadBhatti_CollectFiles.py`, `Angad_authorsFileTouches.py` I was able to gather data on filenames, how many touches were made to each file, the author of the commit messages, and the dates for the messages. In addition, I used a Python script `Angad_scatterplot.py` to generate a scatterplot of how many times a specific author touched a file; each author is a distinctly colored data point.

Results:

- *Figure 1: Portion of CSV generated from Angad_authorsFileTouches.py.*

Filename	Author	Date
app/src/main/java/com/scottyab/rootbeer/sample/CheckForRootWorker.kt	GitHub	5/8/21 6:18
app/src/main/java/com/scottyab/rootbeer/sample/CheckForRootWorker.kt	Scott Alexander-Bown	5/21/21 6:40
rootbeerlib/src/main/java/com/scottyab/rootbeer/RootBeerNative.java	GitHub	5/8/21 6:18
rootbeerlib/src/main/java/com/scottyab/rootbeer/RootBeerNative.java	Scott Alexander-Bown	6/26/15 7:50
rootbeerlib/src/main/java/com/scottyab/rootbeer/RootBeerNative.java	Matthew Rollings	6/26/15 7:57
rootbeerlib/src/main/cpp/toolChecker.cpp	GitHub	5/22/21 5:42
rootbeerlib/src/main/cpp/toolChecker.h	GitHub	5/22/21 5:42
app/src/main/java/com/scottyab/rootbeer/sample/CheckRootTask.java	GitHub	3/20/18 9:57
app/src/main/java/com/scottyab/rootbeer/sample/CheckRootTask.java	Daniel Kutik	11/15/19 18:39
app/src/main/java/com/scottyab/rootbeer/sample/CheckRootTask.java	Scott Alexander-Bown	7/1/16 6:40
app/src/main/java/com/scottyab/rootbeer/sample/CheckRootTask.java	altvrv	3/16/18 8:42
app/src/main/java/com/scottyab/rootbeer/sample/MainActivity.java	GitHub	2/3/20 12:42
app/src/main/java/com/scottyab/rootbeer/sample/MainActivity.java	Daniel Kutik	11/15/19 18:34
app/src/main/java/com/scottyab/rootbeer/sample/MainActivity.java	Scott Alexander-Bown	6/26/15 7:50
app/src/main/java/com/scottyab/rootbeer/sample/MainActivity.java	Mohammed Ezzat	3/16/16 6:14

- *Figure 2: Generated scatterplot of touched files by different authors.*



The [scottyab/rootbeer](https://github.com/scottyab/rootbeer) repository contains various file types, including Java, Kotlin, C++, C, and CMake. In my `Angad_authorsFileTouches.py` script, I added a filter to identify the source files of the listed types within the repository. While the script mines the GitHub repository, it writes to a CSV file, which is then used to generate a scatter plot graph.

Useful Git Commands:

- `git checkout -b <branch>` //creates and checkouts a new branch
- `git add <file>` // used to stage commit message for specified file
- `git commit -m "commit message"` // commits the staged changed with message
- `git push origin <current branch>` // pushes changes from current branch to remote repository