

Ben Rombaut

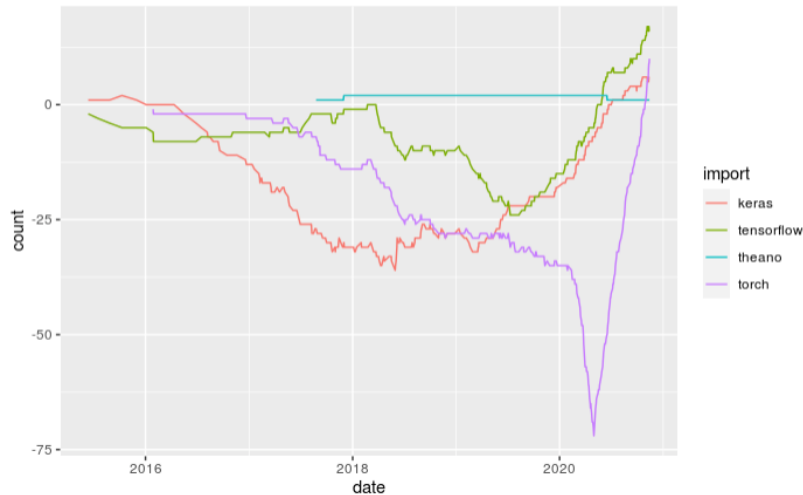
CISC873

Milestone 2 - Summary

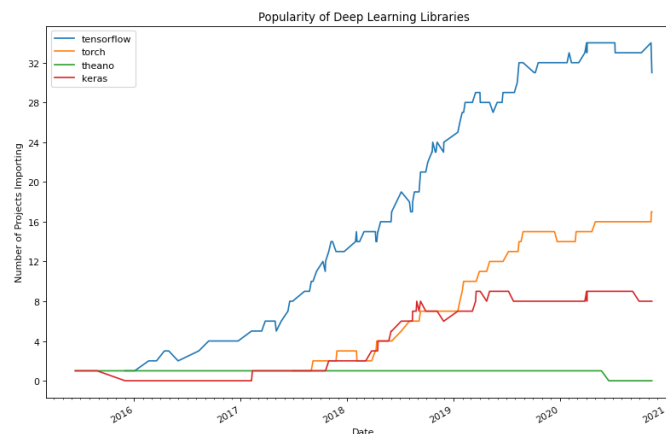
Project Title: The Evolution of Deep Learning Library Uses

GitHub Repo: [https://github.com/brombaut/CISC873\\_TermProject](https://github.com/brombaut/CISC873_TermProject)

My goals for this milestone was to fix the issue with the import counts not being tallied correctly (pictured below). Once I had fixed the issue, I wanted to generalize my approach for extracting import statements to extracting call statement, in order to determine which library calls from deep learning libraries clients were using, and how these uses changed over time.



I was able to fix this issue, and could determine which DL libraries were used by projects across their releases (pictured below). In addition to extracting this information at the project level across releases, I also extracted it at the file level, as well as how many times each library was actually imported in total.



I then expanded this strategy to extract all call statements across releases at the projects level and file level (the graph for this is quite busy and not very helpful, so it's not pictured). I've pushed the updated scripts to the repository. With this information, I am going perform association rule mining to determine which library calls evolve together. Additionally, I need to mine the major release events for the four DL libraries. I will use this information to determine the technical lag of clients behind the libraries, as well as see if clients move away from deprecated library calls.