During this program I joined a team in using source code management to develop a music playlist aggregator. Version control software, like Git is widely used in the industry, from open source software hosted on GitHub, to private companies running their own internal control tools. Companies simply desire Git knowledge. My experience with this kind of collaborative environment will ensure I can seamlessly join an existing development team.

In non-software companies or development on a contractual basis, teams will likely need to coordinate with non-technical stakeholders. Managers do not always have a software background. While practicing UML diagraming, the project I was part of extended itself to that coordination. The process outlined a possible client, an advising department for a university. Clients will rarely have a list of programming outcomes, but instead broad desires and complaints about previous software. In this case the advising department felt the current software was too clunky and slow. Through targeted questioning, achievable solutions such automatic class balancing were agreed upon. This kind of task enumeration avoids possible miscommunications with the clients as to project goals, and gives software developers clear, sub dividable tasks to meet.

The program introduced me to your choices of algorithms, and structures, insertion sort vs. merge sort, but also how to leverage the concepts, such as how to use memory management in the generation of 3d graphics. And after taking the Secure Coding class, potential vulnerabilities, such as buffer overflows in low-level code, or the easy to fix, deadly if missed SQL injection exploits became easier for me to id.

The artifacts displayed here reflect a fully functional web application. It utilizes all elements of a common web stack, including a user accessible web page, backend interfacing code and a SQL server. The program allows users to chart real world data from the Federal Reserve, measure and visualize correlations that could lead to the discovery of new leading indicators, but also make clear my ability to weave all elements of web application programming.