

To convert my existing project to DevOps I simply added a workflow containing the steps required for the assignment. The following steps were added: Build, Lint, Unit Tests, Build Debian, Lint Debian. Also, since the assignment required the program to be “installable” I created a simple client application that runs the program interactively. Since this project was built using .NET, building a release package was very easy and simply involved running ‘dotnet publish’ and adding the necessary configuration to ‘./Program/Program.csproj’ to include the .NET runtime which makes a single-file executable. Once I had this executable, I copied it to ‘./tmp/usr/local/bin’, along with the Debian control file, and built the .deb from the tmp directory. I did not have any major challenges while completing this project. The most difficult part was figuring out how to build the project as a single-file executable, since I did not want the deb file to have to manually install a runtime.

Prior to taking this class, I had not fully understood the importance of DevOps and CI/CD. I also did not realize how often it is used in the real world. Prior to this class I had an understanding of what it was but did not understand the value that it could provide. In fact, the items we have learned from this class have already benefited one of my projects. I recently added a build and test pipeline to my senior design project, and it has proved to be extremely useful. It has found bugs that were not found by running the same tests locally. It also gives me more confidence merging my teammates changes since I can verify that they did not break anything that the tests cover.