Advanced Software Engineering – Project Proposal

Software Quality Assurance is the most expensive phase in the development of any software project. The difficulty in predicting defective software contributes to this cost. If we can better predict which parts of source code are more likely to contain defective software, we can greatly improve the cost effectiveness of software quality assurance. The goal of this research project is to build such a predictive model in Python using Deep Learning.

There are two approaches to software defect prediction; *Within Project Software Prediction*, and *Cross Project Defect Prediction*. The former uses source code within the same project to train and construct a predictive model while the latter leverages source code across various projects to build classifiers. This project will implement a predictive model using source code within a single project.