



COLLEGE of ENGINEERING AND PHYSICAL SCIENCES

SCHOOL OF COMPUTER SCIENCE

MSc Seminar

Thursday December 6, 2018 at 11AM in Reynolds, Room 1101
The Relationship Between Student Mental Wellness and
the Availability of Pre-Submission Unit Testing

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ABSTRACT:

Student mental wellness is an important aspect of student learning and experience and should be a considerable focus for instructors. Current literature has indicated that providing immediate, formative feedback can be one of the largest factors in reinforcing student knowledge and learning. Test-driven development is a method of programming that involves writing tests to check for functionality before writing program code, which can provide students with a form of automated immediate feedback. This has been shown in industry settings to have an improvement in code quality and maintainability, as well as programmer productivity. Using test-driven development in early programming courses for students has also shown these benefits, while also indicating that students' confidence and motivation may show improvements. Since these studies have focused primarily on measuring assignment quality and academic outcomes, our study will look to explore the relationship between providing unit tests to students for their assignments and measures of student mental wellbeing, such as grit, self-efficacy, and engagement. The goal of this study will be to identify if there is a benefit to these elements of student learning through immediate feedback in the form of unit tests.