MSc Defence

Wednesday May 8, 2019 at 10AM in Reynolds, Room 1101

The Relationship Between Mental Wellness and the Availability of
Pre-Submission Unit Testing: An Exploratory Study

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Chair: Dr. Gary Grewal
Advisor: Dr. Judi McCuaig
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Abstract:

Students learning to program can face difficulty when encountering unknown errors without input from an instructor or peer. Current literature has indicated that providing immediate, formative feedback can be one of the largest factors in reinforcing student knowledge and learning. As such, using test-driven development as a form of immediate feedback in early programming courses has been shown to have a positive impact on code quality and maintainability, while also indicating that students' confidence and motivation may show improvements. Since prior research focused primarily on measuring assignment quality and academic outcomes, our study sought to explore the relationship between providing unit tests to students for their assignments and measures of student mental well-being, such as grit, self-efficacy, and engagement. Although the correlations between mental well-being metrics and unit test engagement metrics were found to be generally weak, a number of individual survey questions were identified that could form the basis for a more representative survey in future research. Students were also classified by their usage types and most frequent activity periods, with differences observed that may inform further work.