COLLEGE of ENGINEERING AND PHYSICAL SCIENCES

SCHOOL OF COMPUTER SCIENCE

PhD Qualifying Examination

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Exploring an Automated Feedback System Framework to Facilitate Instructors' Self-Assessment

Chair: Dr. Joe Sawada
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Abstract:

Instructors in the higher education used to get feedback about their work from interacting with their students. In today's world of large classrooms and online learning, that is extremely difficult due to the large number of students and the increased class size. As a result, the instructors may only receive negative and subjective feedback from students who are dissatisfied enough to complain. Automated feedback has been shown to be valuable for students, yet limited studies investigated the impact of feedback on instructors. The goal of this research is to explore the potential of automated feedback systems that can facilitate instructors' self-assessment. This research proposed an Automated Feedback System for Instructors (AFSI) framework that is designed to provide feedback to instructors.

The investigation will identify the essential skills influencing instructors to success. Those set of skills will be used to design a process that can provide automated feedback to instructors. We then propose an architecture for immediate feedback based on those skills. We present a prototype system that can provide automated feedback based on a subset of the chosen skills: communication, organizational, and planning for a specific element of teaching that is the preparation of course outline. The proof of concept implementation produced for this research uses course outlines data items as inputs to the proposed framework. It will also investigate how to relate the outputs to the chosen skills. Finally, we can apply some data analysis on the outputs to explore some patterns and indications that could help to discover a useful mechanism to design automated feedback to instructors.