Intelligent Tutoring Agent for Engineering Diagrams

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Stephen Gilbert and John Jackman, faculty mentor

Enruo Guo and Mostafa Amin-Naseri, graduate student mentors

Interns:

Anna Baglione, Computer Science and Engineering from Ohio State University

David Strength, Computer Science from Belmont University

Jose Virella Velazquez, Computer Engineering from University of Puerto Rico, Mayaguez Campus

The aim of this project is to enhance and refine an intelligent tutoring tool which helps undergraduate engineering students in solving problems in statics and thermodynamics. Since framing a problem is a key step of solving it, this tutor is designed to analyze students' sketches of the problem, evaluate their accuracy, and send them appropriate feedback. A later goal is to implement a student model that could intelligently suggest an appropriate problem based on the student's previous performance. An experiment is going to be conducted on an actual class of students to examine the effectiveness of the tutor. REU interns will contribute to enhancing and implementing the matching functions, feedback messages, or the user interface and running the experiments. The results have the potential for academic publishing.