Project Synopsis

A common problem introductory chemistry students have is that they are unable to visualize how chemistry concepts work on a molecular level. With this problem in mind, our goal for this project is to create a visual representation of how molecules look and interact so that chemistry students are able to see 3D representations of molecules and therefore have an easier time understanding the molecular mechanics behind basic chemistry concepts. This visual representation will be in the form of a game which will enable students to interact with 3D molecules and observe how they interact with other molecules.

This project continues the work of the last year’s senior project team and aims to expand upon the levels and game content that team created. In addition, this project aims to expand upon the basic server structure in place so that chemistry instructors can gain a better understanding as to how students are progressing in the game and how that progress correlates to the students’ understanding of specific chemistry concepts. The top two priorities in this project are playability and realistic modeling. These priorities may conflict with each other at times since the computational effort to display realistic molecules and their interactions may detract from the overall playability of the game. Therefore, a balance between playability and realism is desired for this project.