**Columbus – An A\* Integrated Smart Navigation System**

I would be a rich man if I had a nickel for every time I found someone who lost their way in Wean Hall. For my term project, I worked to solve this issue. Columbus is a Wean Hall navigation system powered by a self-coded A\* algorithm, whose primary heuristic is direct, Euclidian distance calculation. This A\* algorithm finds the shortest path distance to any coded destination in Wean Hall and does so in the most efficient possible way.

In order to facilitate use, Columbus integrates speech recognition and keyword analysis search into the user experience; Columbus uses the speechrecognition module and the pyaudio module to do this. With these audio functionalities, Columbus has significant potential to make Wean Hall (and other buildings and areas as well) accessible to the visually-impaired. I hope to accomplish this task in the future.