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CS 238 Project Status Update

Disagreement can make conversation difficult. In today's world, issues of importance often become incredibly polarizing. Given the pandemic, certain conversations – with anti-maskers, for example – are all the more necessary. Taking the proper precautions could prevent tens of thousands of deaths in nationwide. We seek to develop a chatbot that learns to have these difficult conversations, actively learning the best policy to convince a COVID-19 skeptic to take proper safety precautions regarding the pandemic.

[Completed] Baseline: We have implemented a deterministic chat-bot using Facebook Messenger. This bot initiates a welcome message, which is situated at the root of the tree. The user selects from pre-determined actions, and we deterministically send a response based on the current position in the tree and the user's selected action.

[To Do, by 10-25] Learn the Best Policy in a Tree with Value Iteration: We will learn the best policy using value iteration to determine how to best respond given a state in the current tree and a response from the user.

[To Do, by 11-1] Learn the Best Policy in a Tree with Continuous Actions: We will learn the best policy by selecting a response from a set of possible replies that we can return in response to a freeform message from the user. The reward will be determined from the sentiment of the user.

[To Do, by 11-6] Write paper.