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CSE 415

Project Milestone B Update

For this update, we mainly wanted to solidify which wicked problem to explore and determined the scope of the project. Using the four-page worksheet from the beginning of the quarter, we set the problem space, operations, and goal. The wicked problem we chose is disease, and to make it fit the scope of the project, we wanted to focus on just HIV/AIDS. To design the state space, we decided to use various metrics to determine the condition of a given state, including spreading factor, case count, death count, and more. These conditions are changed given a certain operation and used to calculate heuristics to help find the better option when traversing the state space in developing a course of action. We also defined various operations that allows the current state to move to a new state. Similar to Assignments 1 and 2, our operations are represented as triples: {name, precondition_function, state_transformation_function}. The current implementation includes the set up with various regions and their conditions, which we tried to keep as realistic as possible through research. The program currently allows the user to select actions based on the current state of the world. Only one action can be done in a span of 3 months. Depending the action done, the conditions of that region is adjusted. In the coming week, we aim to implement two different heuristic functions so that our A* algorithm can find the optimal course of action. Additionally, we want to add a feature such that if an action is done for a given region, it cannot be done while it is in progress (if the time frame for that action is not over).