

This repository contains:

1. Code for all models
2. User experiment data

(1) Code for all models

Each Python file begins with `[map_name]`, where `[map_name]` corresponds to one of the four maps we use. The functionality is consistent across maps. Below we use **MapA** as an example to describe the code:

Training TrustPOMDP-related models:

- `[MapA]train_trustee_agent_highB_highI_version1.py`: trains the first trustee agent with high Benevolence and high Integrity.
- `[MapA]train_trustee_agent_highB_highI_version2.py`: trains the second trustee agent with high Benevolence and high Integrity.
- `[MapA]train_trustee_agent_highB_lowI.py`: trains a trustee agent with high Benevolence and low Integrity.
- `[MapA]train_trustee_agent_lowB_highI.py`: trains a trustee agent with low Benevolence and high Integrity.
- `[MapA]train_trustee_agent_lowB_lowI.py`: trains a trustee agent with low Benevolence and low Integrity.

All trained trustee agents are saved under the `final_trained_models` directory.

Once the trustee agents are trained:

- `[MapA]train_ABI_inference_model.py` runs the trustee agents to train the ABI inference model. Outputs are saved under `[MapA]abi_model_outputs_Boltzmaan_10times_adaptivelength_FFFFFFFF FFFFFFFF FINAL_with_uncertainty`.
- `[MapA]train_TrustPOMDP.py` trains the TrustPOMDP agent, with the trained models saved under `final_trained_models`.

Training baseline models:

- `[MapA]train_SP.py`: trains the SP agent population required for the first stage of the FCP model.
- `[MapA]train_FCP.py`: trains the FCP model using the SP agents.
- `[MapA]train_MEP_population.py`: trains the agent population required for the first stage of the MEP model.
- `[MapA]train_MEP.py`: trains the MEP model.

- `[MapA]train_POMDP.py`: trains the basic POMDP model.

Model testing:

- `[MapA]test_TrustPOMDP_with_rule_based_agents.py`: tests the TrustPOMDP model using rule-based agents.
- `[MapA]test_baselines_with_rule_based_agents.py`: tests the baseline models using rule-based agents.

(2) User experiment data

The raw data from the human-subject experiment is stored under the Human Experiment Data directory, containing 102 JSON files.

You can run `extract_overcooked_logs.py` to analyze and visualize the user experiment data.