

Strategic agents for territory control (Risk)

Multi-Agent System

Risk is a strategy board game of diplomacy, conflict and conquest for two to six players. It is played on a board depicting a political map of the earth, divided into forty-two territories, which are grouped into six continents. Turn rotates among players who control armies of playing pieces with which they attempt to capture territories from other players, with results determined by dice rolls. Players may form and dissolve alliances during the game. The goal of the game is to occupy every territory on the board and in doing so, eliminate the other players.

The system to be designed will have agents serving as players and each's main goal will be winning. During the course of the game, the agents will compete against each other or cooperate within an alliance, depending on the strategies chosen. Agent's interactions will include forming and dissolving alliances and negotiating strategies within an alliance. Whenever an agent is in an alliance, its goal will be to conquer more land and helping the members of the alliance.

Strategies will vary between a belligerent approach, where a player never tries to form alliances, and a diplomatic approach, where the player makes alliances whenever possible.

Examples of dependent variables	Examples of independent variables
Final position of each player	Amount of territories in the board
Starting count of each player's army	Criteria used to decide a battle
Amount of new armies placeable by each player on their turn	Relative worth of each army type (Cavalry worth 5 Infantry and Artillery worth 10 Infantry or 2 Cavalry)