Collective Self-awareness in Progress and Plans

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SA

- Initialization

Collective SA

- Initialization

Semantic SA - Activated Area

Training phase

- Word level
- Sentence level

Semantic SA - Sharing Models

Training phase

- Word are built by clustering

Future plans

Building words on sensor heterogeneity level

- Different sensors (e.g one agent Temperature)

Goals and Path

- Making vocabulary between data of different sensors

Methods to influence a decision

- Declaring intention by sentences (sequence of words)
- Describing situation by sentences (sequence of words)

Probable plan for Force field common activated area

Force Field First act according to sensors then assess inform intention based on common formed words:

- Reinforcement learning
    - Rewards will be modeled by attractive forces
    - Costs will be modeled by repulsive forces

Vocabulary

- Must be formed among different types of sensors

Probable plan for semantic awareness

- Similar word in a different sequences must induce new actions

Such as in driving

- Taking over
  - Attractor vehicle = Turning left + increase speed + Turning right
  - Follower vehicle = nothing + decrease speed a little + nothing
- Getting out of park:
  - Attractor vehicle = Turn left + increase speed
  - Follower vehicle = move forward a little

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