ICIRA 2024 Special Session Proposal

Title of the Proposal: Visual, Linguistic, Affective Agents: Hybrid-augmented Agents for Robotics

Technical Outline of the Session and Topics:

Outline of the Session:

With the rapid development of AI applications in robotics, autonomous driving, and drones, multimodal hybrid enhanced AI models are increasingly attracting more attention. At present, these types of model integrate multimodal information, such as visual, language, action, and emotional multimodal information to achieving end-to-end learning from perception to decision-making. On this basis, multimodal AI models need to continuously enhance their deeper understanding and interaction abilities to the physical world, and build a hybrid augmented model that is closer to human cognition, in order to seamlessly connect the perception, reasoning, and action of the physical environment through a generative world model.

Topics of the Session:

- *Topic 1 Hybrid Augmented AI for Robotics*
- *Topic 2 Visual Perception and Computing*
- *Topic 3 Language Model for Robotics*
- *Topic 4 MutliModal Models for Robotics*
- *Topic 5 3D Location and Posture Estimation*
- *Topic 6 VLA Modeling*
- *Topic 7 Affective Agents for Robotics*

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