

OIT-RITS(JAPAN)



Development point

Our focus:

- Flexibly adapt to a newly visited home environment
- How to achieve tasks in a new home environment
- How to recognize a user's utterances and determine actions to achieve the user's goals in a noisy home environment?
- How to streamline sharing and managing various software at remote and multiple locations and accelerate researches and developments?

Development on cloud



Environment Understanding



Introduction of your team

【Inspiration, motivation to form a team】

Our team consists Ritsumeikan's smart task planning, and development infrastructure and OIT's motion control module which is fundamental of service robots.

【Future outlook】

(1) A robot to understand a hierarchical structure of a home environment. (2) A robot to learn places and objects associated with meaning, in a home environment by an unsupervised manner. (3) A robot to estimate the relationship between places and objects by transferring spatial concepts.

Role	Name	Affiliation/Title	Specialty, Field of study
Team leader	Yuki Inoue	Osaka Institute of Technology/ Professor	Development of autonomous mobile robot
Image Recognition	Naoshi Matsuo	Ritsumeikan University / Assoc. Professor	Image recognition, machine learning
Navigation	Shoichi Hasegawa	Ritsumeikan University / Master 1 st	Robot control, task planning
Machine Learning	Akinori Kanechika	Ritsumeikan University / Master 1 st	Image recognition, visualization, machine learning
Grasping	Masaki Ito	Ritsumeikan University / Bachelor 4 th	Control of manipulators, inverse kinematics, active grasping
Voice synthesis	Cai Chengkai	Ritsumeikan University / Doctor 4 th	Speech enhancement, remote audio capturing, voice synthesis, speech recognition
Navigation	Takayuki Nakayama	Osaka Institute of Technology / Professor	Image recognition, motion control
Software Development	Shunya Tanaka	Osaka Institute of Technology / Master 2 nd	Image recognition, robot control software
Test, data set up	Shoi Higa	Osaka Institute of Technology / Bachelor 4 th	Control of manipulators
Machine Learning	Yusei Nagao	Osaka Institute of Technology / Bachelor 4 th	Application of machine learning



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HP etc. <https://sites.google.com/em.ci.ritsumei.ac.jp/oit-rits-wrs2020> (OIT-RITS)