

ChiefScientistOffice (Japan)



Development point

At SoftBank Corp. Chief Scientist Office, we are developing a reconfigure modular robots, similar to that of computer/automobile, and a flexible software framework.

Our autonomous mobile robot "Cuboid-kun", equipped with a newly designed scalar type arm, will participate in the Future Convenience Store Challenge.

- Cuboid-Kun
- Autonomous & Transportation
- Design Modifications
- New device compatibility
- Electrical System Modification

- Developed Feature/Technical Verification
- Robot Arm
- People Detection
- Elevator Communication



Introduction of your team

【Inspiration, motivation to form a team】

When developing a mobile manipulator, the hardware design changes significantly depending on how much performance is required from the mobile base and manipulator. We participated in this competition to verify the performance required to realize "robot that is useful to humans" and investigate how much can be achieved with the existing technology.

【Future outlook】

We implemented various functions using existing packages such as MoveIt but found many application problem such as long calculation time and unfinished functions. In the future, we plan to investigate and verify methods to solve the problems mentioned above and develop a mobile manipulator that can be used as service robot.

Role	Name	Affiliation/Title	Specialty, Field of study
Team leader	Takaaki Numai	SoftBank Corp.	Haptics Interface, Surgical Robotics
Sub leader	Joshua Supratman	SoftBank Corp.	Decision Making Model, Human Robot Interaction
Member	Tatsuro Sakaguchi	SoftBank Corp.	Computer Science, Computer Vision
Member	Airi Yokochi	SoftBank Corp.	Emotion/Affection Engineering, Miniature Design Robot
Member	Yuki Onishi	SoftBank Corp.	Control Engineering
Member	Yushi Kaida	SoftBank Corp.	Mechanical Engineering
Member	Masaya Morinaga	SoftBank Corp.	Mechatronics, Structural Design, Production System



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