

In conjunction with the 16th International Conference on Intelligent Autonomous Systems (IAS-16), Lattel Robotics is proud to organize an **AI Applications Workshop** to provide a unique opportunity to participants to gain insights on technical service robot development for autonomous systems.

Running in both virtual and onsite formats simultaneously, the workshop offers an overview of ROS-based AI application development for speech interaction, computer vision and navigation. Participants will be provided with Jupiter IO, an AI Learning Box, to be connected to own laptop during the workshop, by loan/sale, depending on the mode of participation.

Date	:	Tuesday 22 June 2021
Time	:	10am – 6pm SGT
Venue for onsite participation	:	National University of Singapore
Last Day to Register	:	Friday 4 June 2021

Fees for onsite participants

Workshop Fees	:	S\$660
Jupiter IO Retaining Fees*	:	S\$580

(*optional payment at the spot, if participant wishes to retain Jupiter IO post-workshop)

Fees for virtual participants

Workshop Fees**	:	S\$1240
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(incl. Jupiter IO and worldwide DDU delivery, excl. applicable import taxes)

Workshop Instructor



Dr. Jeffrey Tan
PhD, University of Tokyo

Workshop Contents

Robot Introduction and Development Environment Setup

- Hardware and software introductions
- Development environment setup
- Basic ROS introduction

Speech Interaction

- Speech Synthesis (text-to-speech)
- Speech Recognition

Computer Vision

- CamShift object tracking
- People/Face detection and recognition

Navigation (Simulation)

- SLAM map building
- Autonomous navigation

Register now: <https://forms.gle/sX7BspW3b6UPQsqN7>

Email Enquiry: jerry.tan@lattelrobotics.com

JUPITER IO



Jupiter IO is a Personal AI Learning Box for individual technical development:

- Direct plug-and-play via a USB connection for standard robotic development environment (Ubuntu & ROS) without the need for software installation.
- Equipped with 3D visual perception and omnidirectional speech interaction system for technical development using own laptop / desktop.
- AI software modules (Python & C++) available include computer vision, speech interaction and navigation & robotic arm (simulator-based).

TECHNICAL SPECIFICATIONS

SIZE AND WEIGHT	
EXTERNAL DIMENSIONS (L x W x H)	115 x 88 x 108 mm
WEIGHT	0.3 kg
BATTERY AND POWER SYSTEM	
USER POWER	USB 3.0 Port
SENSORS	
3D VISION SENSOR	Color Camera: 640px x 480px, 30 fps
	Depth Camera: 640px x 480px, 30 fps
STORAGE DEVICES	
INTERNAL HARD DRIVE	120G SSD
OPERATING SYSTEM	
SYSTEM	Ubuntu
SPEECH INTERACTION	
SPEAKER	2W*2 *
MICROPHONE	Omnidirectional
FREQUENCY RESPONSE	50Hz-20kHz
WIFI REMOTE CONTROLLER	
TRANSMISSION RATE	150Mbps