

Dwindra Sulistyoutomo

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Profile

Robotics engineer with over seven years in industrial robotics and a master's background in bio-inspired humanoid robots. Experienced in motion planning, manipulation, motion control, and developing and deploying ROS-based systems. Research interests include **human-robot coexistence and intelligent robots for daily life**, especially service and assistive robotics.

Education

The University of Tokyo

Master of Information Science and Technology

Tokyo, Japan

Oct 2016 – Sep 2018

- **Thesis:** "Sequential Jumping-Stepping Motion on Bipedal Musculoskeletal Robot for Agile Locomotion"
- Researched agile locomotion of a bio-inspired musculoskeletal humanoid driven by pneumatic artificial muscles and developed a sequential jumping-stepping motion strategy based on human muscle activation patterns.
- Built and controlled a 1.2-m-tall humanoid robot with 30 artificial muscles and experimentally demonstrated faster stepping through pre-jumping, identifying landing timing as an important factor in motion performance.

The University of Tokyo

Non-degree Graduate Research Student

Tokyo, Japan

Oct 2015 – Sep 2016

- Studied the design and control of pneumatic artificial muscles as alternative actuators for robotic systems.

Institut Teknologi Bandung

Bachelor of Science in Electrical Engineering

Bandung, Indonesia

Aug 2010 – Sep 2014

- **GPA:** 3.69 / 4.00 (**Cum Laude**)
- **Thesis:** "PI Anti-Windup Speed Control System for DC Motor in Robosoccer Small-Size League"

Professional Experience

Hitachi Automation, Ltd.

Senior Robotics Engineer, Kyoto Robotics Division

Tokyo, Japan

Apr 2023 – Present

- Serve as the primary technical expert for software development of palletizing robot systems.
- Reduced takt time by optimizing motion planning for deployed palletizing systems.
- Developed and deployed palletizing systems for production operation, including projects for a leading Japanese beverage company and a leading Japanese manufacturer of factory automation components.
- Worked directly with customers on-site and remotely to resolve production issues and implement bug fixes and system improvement based on operational feedback.

Kyoto Robotics Corporation, (acquired by Hitachi Automation, Ltd.)

Robotics Engineer

Tokyo, Japan

Apr 2019 – Mar 2023

- Designed a tree-based algorithm for SKU-sorted palletizing, extending palletizing capability beyond unsorted and mixed-sorted cases.
- Developed motion planning for industrial palletizing robots, including integration with custom grippers.
- Redesigned the core software architecture of the palletizing system to improve scalability.
- Built a web GUI for remote operation of the ROS-based system, and CI/CD pipelines for its ROS repositories.

QIMTronics

Embedded System Programmer

Bandung, Indonesia

May 2015 – Aug 2015

- Developed a display system for the Core Module of haul trucks using ARM Cortex-M3 microcontrollers.

Publications

- **D. Sulistyoutomo**, S. Nishikawa, R. Niiyama, and Y. Kuniyoshi, "Sequential Jumping-Stepping Motion on Musculoskeletal Humanoid Robot for Agile Locomotion," in *Proc. IEEE International Conference on Robotics and Biomimetics (ROBIO)*, 2018, pp. 2328–2333 (peer-reviewed). [DOI](#)
- **D. Sulistyoutomo** and A. S. Rohman, "PI Anti-Windup Speed Control System for DC Motor in Robosoccer Small-Size League," in *Proc. Tokyo Tech Indonesian Commitment Award (TICA)*, 2015, pp. 42–47 (peer-reviewed).

Patent

- Á. K. Vonderviszt, **D. Sulistyoutomo**, T. Ishida, "Workpiece Stacking System," Japanese Patent 7387931, Nov. 28, 2023. [J-PlatPat](#)

Honors and Awards

Scholarships

- **Japanese Government (MEXT) Scholarship** (Master's degree), Sep 2016 – Aug 2018.
- **Japanese Government (MEXT) Scholarship** (Research student), Oct 2015 – Aug 2016.

Awards

- **President's Sales Award** (Hitachi Automation, 2024 Year-End Awards), Apr 2025.

Skills

- **Robotics**. Motion planning, robot manipulation, motion control, vision-guided robotics, robotic system integration and simulation.
- **Bio-inspired robotics**: Pneumatic artificial muscle actuation, musculoskeletal humanoid robotics, bipedal locomotion control.
- **Robot platforms**. ROS 1, ROS 2, MoveIt, FANUC and Yaskawa industrial robots.
- **Software engineering**. Algorithm design, software architecture, software testing, code refactoring and review, CI/CD, version control.
- **Programming languages**. Python, C++, Bash, JavaScript, HTML.
- **Development tools**. Ubuntu, WSL, Docker, AWS; Git, GitHub Actions, GitLab CI, Travis CI, Jenkins.
- **Hardware**. Robot design and fabrication; embedded systems (Raspberry Pi, BeagleBone, Arduino).

Languages

- **Indonesian**, Native.
- **English**, Full professional proficiency, TOEFL-iBT 103.
- **Japanese**, Professional working proficiency, approx. JLPT N2.