

# J-Anne Yow

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## Education

**Nanyang Technological University**, Ph.D. in Mechanical Engineering Sept 2021 – present

- **Supervisor:** Prof Ang Wei Tech
- **Proposed Dissertation:** Enhancing Human-Robot Interaction for Personalised Robot Behaviour in Assistive Feeding
- **Research Interests:** Human-Robot Interaction, Machine Learning, Foundation Models, Continual Learning

**Nanyang Technological University**, BE in Mechanical Engineering with a Second Major in Business Aug 2017 – May 2021

- **GPA:** 4.92/5.00, Dean's List every Academic Year
- **Awards:** Dr Leung Shiu Kee Gold Medal Award, ASEAN Undergraduate Scholarship

**Hwa Chong Institution**, A-Levels Jan 2015 – Nov 2016

- **Awards:** Hwa Chong Diploma with Distinction, ASEAN Scholarship

## Research Projects

**Robot-Assisted Feeding** 2022 – present

- Implementing an end-to-end pipeline for robot-assisted feeding, including bite sequencing, food acquisition with a spoon, and transferring food to the user.
- Developing a personalized assistive feeding system that adapts to user preferences and needs, leveraging language corrections to modify robot actions.
- Developing a goal-conditioned scooping policy to scoop a target amount of food while considering different food properties.
- Exploring the integration of foundation models in robotics for more adaptive and intelligent robots.

**Grasping in Clutter** 2020 – 2023

- Developed a shared autonomy framework to decide when and what to query users in scenarios where uncertainty is high, enabling more effective human-robot collaboration.
- Developed a point-and-click interface for robotic grasping in cluttered environments by generating better grasp poses through object segmentation.

## Work Experience

**Research Assistant**, Rehabilitation Research Institute of Singapore – Singapore Aug 2021 – present

- Spearheaded the Robot-Assisted Feeding project, focusing on developing a personalized assistive feeding system.
- Mentored seven undergraduate students on final year projects, guiding them through the research process and providing technical support.
- Assisted in preparing funding proposals to support the project.

**SaaS Sales Operations Intern**, ByteDance – Singapore May 2020 – July 2020

- Built and optimized dashboards for the Lark APAC team, improving data-driven decision-making and operational insights.
- Enhanced data quality and integrity in Salesforce.com, streamlining processes and ensuring consistency across regional teams.
- Conducted analysis on daily active user (DAU) trends and tenant health scores, providing product-market fit understanding and insights for the go-to-market strategy.

**Engineering Intern**, Oishii – New Jersey, USA Jan 2020 – Mar 2020

- Oversaw a project which involved integrating farm systems and forecasting future infrastructure requirements to minimize operational risks.

- Evaluated and built communication pathways of sensors and actuators inside the world's largest indoor strawberry vertical farms to automate the farm.
- Coordinated and collaborated with contractors of different expertise to integrate systems and solve current infrastructure limitations.

## Journal Publications

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<b>ExTraCT - Explainable Trajectory Corrections for language-based human-robot interaction using Textual feature descriptions</b>	Sept 2024
<i>J-Anne Yow</i> , Neha P Garg, Manoj Ramanathan, Wei Tech Ang	
Frontiers in Robotics and AI	
<b>Shared Autonomy of a Robotic Manipulator for Grasping under Human Intent Uncertainty using POMDPs</b>	Nov 2023
<i>J-Anne Yow</i> , Neha P Garg, Wei Tech Ang	
IEEE Transactions on Robotics (T-RO)	

## Other Publications

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<b>Adaptive Scooping in Simulation for Assistive Feeding: Meeting User Preferences in Bite Size</b>	Oct 2024
<i>J-Anne Yow</i> , Neha P Garg, Wei Tech Ang	
Workshop on Interactive Robots and AI for Healthcare, IEEE/RSJ International Conference on Intelligent Robots and Systems	

## Service

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**Reviewer:** IEEE Robotics and Automation Letters

## Skills

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**Programming Languages:** Python, C/C++ , R, LaTeX, SQL

**Robotics:** Machine Learning, ROS, MuJoCo, Computer Vision, Linux

**Languages:** English, Chinese, Malay