

# LIN HONG YI

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## EDUCATION

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**National University of Singapore** **Aug 2024 - Present**  
**Bachelor of Engineering (Engineering Science)**

- Second Major in Innovation and Design
- Engineering Scholars Programme

## WORK EXPERIENCE

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**Fabrica AI, Robotics DevOps Intern** **Jan 2024 - May 2024**

- Collaborated with cross-functional engineering teams to optimize logistic flow and streamline technical procurement processes for mechanical and electrical systems
- Coordinated with Chinese manufacturing partners on SLA and FDM 3d printing projects ensuring appropriate production quality based on engineering requirements
- Ran tests and collected data on different iterations of extrusion nozzles, correlating flow as well as nozzle profile to grout quality and depth parameters
- Developed a dataset to collect and parametrise output quality to be used for training a computer vision model

## PROJECTS

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**RoboMaster DART team, Undergrad Research Experience** **Aug 2024 - Present**

- Collaborated with interdisciplinary team of 4 to conceptualise and construct a Dart launcher to serve as an initial working prototype for the NUS Calibur robotics team to base future iterations and project direction. Of different systems, I developed mechanics of the Dart Projectile
- Modelled both passive and actively controlled dart assemblies on Solidworks (active Aerodynamic control surfaces with on-board computer vision based input)
- Aerodynamic simulations (Solidworks CFD) for Dart corresponding to different fin shapes and geometry, projectile motion and flight trajectory were then modelled in MatLab
- Collected data and iterated on designs based on principles such as center of gravity, lift and drag coefficient

**Remote Desktop and 3d printing system** **Jan 2024 - Present**

- Utilised a ESP32-S3 to poll for commands, changing power states using a MOSFET
- Tailscale used as networking solution to allow for remote access into home network, allowing access into remote desktops and 3d printers and ESP32s
- Telegram API used to send updates regarding 3d printing to allow for monitoring

**NASA Space Apps Challenge** **Expected Oct 2024**

- Extracted NASA's publicly available geospatial databases to generate agriculturally relevant data

## TECHNICAL SKILLS

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- Computer Aided Design (Solidworks)
- 3d printing, FDM, Proficient in Slicer and print settings as well as printer maintenance

- CPP, Python, Arduino Framework, Database management
- Embedded systems

## **LEADERSHIP EXPERIENCE**

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### **Project Athlos, Chairperson**

**Jan 2021 - Jun 2021**

- Chaired a team of sports Leaders to work with Special Olympics Singapore to raise \$5000 in a fundraiser, working closely with the Athletes, Organisation and volunteers

### **Nanyang Junior College, Engineering Interfaculty Games, Tennis Captain**

- Conducted trainings, handled administrative work and organised friendly matches against other Schools and Faculties respectively

### **Nanyang Junior College Leadership Training Camp, Chief Facilitator**

**Dec 2021 - Jul 2024**

- Worked closely with Student Leadership Development team to create an environment to nurture student's leadership, managed a team of alumni volunteers who served as facilitators

## **LANGUAGES**

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- English (Native), Chinese, Thai (Conversational)