

## Faculty of Engineering

### Summer Research Program 2022-2023

Project Title: AI-aided dynamic scheduling of production line

Supervisor(s): Yunlong Tang

Department: Mechanical and Aerospace Engineering & Material Science and Engineering

Email: [yunlong.tang1@monash.edu](mailto:yunlong.tang1@monash.edu)

Website profile of project supervisor: <https://www.monash.edu/engineering/idmmlab>

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### Objective

This project aims to develop a smart dynamic scheduling system for a 3D printer farm. A scheduling algorithm needs to be developed based on the data obtained from digital twin to decide how to increase the production line throughput and reduce the lead time.

### Project Details

We have several different printers in the smart manufacturing digital twin lab. A student needs to develop a dynamical scheduling algorithm with consideration of machine speed, materials, part features and functional requirements. This scheduling algorithm will decide how to distribute jobs to each 3D printer.



*Figure 1 Example of 3D printer farm*

### Prerequisites

No prerequisites, but a student who has an AI background would be preferred.

### Additional Information

An applicant who is interested in this project please contact Dr Yunlong Tang [Yunlong.tang1@monash.edu](mailto:Yunlong.tang1@monash.edu). The interview is required.