

# Muhammad Danial Bin Kamalrudin

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## PERSONAL PROFILE

A highly passionate Engineering Product Development undergraduate interested in robotics. Possesses strong analytical skills and technical knowledge in CAD software and rapid prototyping. A forward-looking individual with outstanding communication, teamwork, and the ability to navigate in a global environment.

## EDUCATION

### Singapore University of Technology and Design (SUTD)

Singapore

- Bachelor of Engineering (Engineering Product Development)
- GPA 3.81/5.0, SUTD Global Merit Scholarship Holder
- Date of graduation: June 2025

May 21 to Present

### Temasek Polytechnic

- Diploma in Aerospace Engineering
- World Skills Singapore 2019 (Automation Category)

Singapore

May 16 to Apr 19

## WORK EXPERIENCES

### Singapore University of Technology and Design (SUTD) Temasek Labs

Singapore

#### Research Study Assistant, Part Time

May 24 to Aug 24

- Gained better proficiency in using Solidworks CAD software.
- Assisted in the rapid prototyping and assembly of multiple monocopter prototypes
- Prototyped Mounts for Electronics for drone projects

### Korvis Automation

Singapore

#### Mechanical Engineering, Intern

Sep 23 to Dec 23

- Gained a better understanding of machine integration and factory acceptance tests
- Presented directly to the senior management team in weekly meetings and actively participated in inter-team discussions.
- Aided in the integration and testing of a new machine using rapid prototyping methods.

## PROJECTS

### HeDGe

#### Team Leader, Rapid Prototyping Specialist

- Led a team of 6 students to build and develop a helium-based drone guide for use in indoor settings

### Sonorous

#### Team Leader, CAD Specialist

- Assisted in the creation of a CAD model of the final product to showcase.

### Capstone Arborarm (FYP)

#### Team Leader, Drone Adviser

- Led a team of 6 students to build and develop a drone capable of picking up object stuck in trees
- Designed and Built custom frame for drone

## COMPETITIONS

### Singapore Amazing Flying Machine Competition 2022

Singapore

#### Team Member (Hardware)

Dec 21 to Mar 22

- Won 1<sup>st</sup> Place in the Cat E Swarm Category.
- Thought of creative ways to improve the efficiency of the drone, extending its flight time, and optimizing the ideal formation to minimize the drift in the swarm.
- Assisted the team in strategizing plans to increase the number of points.

**Singapore Amazing Flying Machine Competition 2023****Cat E Team Coordinator**

- Assisted in strategizing and planning between teams.
- Coordinated with the advisor to book venues for training and testing.

**Singapore****Dec 22 to Mar 23****Singapore Amazing Flying Machine Competition 2024****Cat E and D Team Coordinator, Designer**

- Won 1<sup>st</sup> Place in the Cat D1 Category.
- Achieved Judge's Commendation for Cat E Swarm Category
- CAD new frame and mounting design in the Cat E category and Cat D Pickup mechanism.
- Lead teams in ideation of new designs, optimizing strategies, managing logistics and schedules

**Singapore****Dec 23 to Apr 24****RoboClash 2023****Team Member (Coach)**

- Won 1<sup>st</sup> Place.
- Directed the drivers of the team to prioritize specific objectives to overcome opponents.
- Coordinated with other alliance members to create a strong cohesive strategy.

**Singapore****Jan 23****What The Hack Hackathon****Team Member (Hardware Specialist)**

- Won 1<sup>st</sup> Place in Healthcare Category.
- Designed and prototyped winning product design.

**Singapore****Dec 22****CO-CURRICULAR ACTIVITIES**

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**Electric Vehicle (EV) Club****Vice President**

- Organised and planned various EV-related design and tutorial workshops i.e. 3D Printed RC Workshop, Go Kart Workshop
- Lead the Frame Team on J23 Go Kart Design Project
- Assisted with Electric Vehicle Additive Manufacturing (EVAM) Project Testing

**Singapore****April 22 to Mar 23****SUTD Open House Committee****Project Director Fifth Row Showcase**

- Planned and coordinated an Open House Showcase with over 400 volunteers to share with the public about student life at SUTD.
- Assisted the Office of Marketing in creating a floor plan to accommodate the needs of over 50 student organizations.

**Singapore****April 22 to Mar 23****ADDITIONAL INFORMATION**

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- Hardware Skills: Laser Cutting, CNC Milling, Soldering, 3D Printing.
- CAD Software: Solidworks, Fusion 360
- Programming languages: Python
- Language: English (Native), Malay (Native)