

# JAY DICKSON

## AEROSPACE ENGINEERING STUDENT

### CONTACT

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### SKILLS

#### Design and Analysis Tools

Solidworks, Catia, AutoCAD, Fusion360  
Ansys STK, Abaqus CAE, eLaminate

#### Software and Programming

Python, JS, SQL, React, MATLAB, C#  
Microsoft and Google Suite  
Google Admin, Active Directory  
Windows, MacOS, Unix/Linux  
Command Line Tools

#### Administration

Technical Writing, Literature Reviews  
Kanban Boards, Agile Workflow

### EDUCATION

#### Bachelor of Aerospace Engineering

RMIT

2020-Present

Entering into my final semester at RMIT.  
Completing my studies in June 2024.

#### Partial Degrees in IT and Science

RMIT

2017-2020

Completed part of an IT and Science  
Degree

#### Victorian Certificate of Education

Montmorency High School

2012-2017

Completed VCE Year 12.

### TRAINING

#### HLTAID011

Provide first aid

#### HLTAID009

Provide cardiopulmonary resuscitation

#### HLTAID010

Provide basic emergency life support

### PROFILE

Enthusiastic Aerospace Engineering student at RMIT with a strong passion for space, technology, and software development. Committed to academic excellence and continuous self-improvement. Skilled in developing personal projects and dedicated to staying current with industry trends. Eager to contribute to the aerospace and technology sectors.

### EXPERIENCE

#### Digital Technology Officer

St Martin of Tours Primary School 2019 - Present

##### Responsibilities

- Oversee the integration of technology into classrooms
- Repair and manage IT hardware
- Manage users, restrictions, accounts, groups and policies

##### Projects

- Developed a dual-purpose internal communication system that serves as both an administrative note repository for the IT team and a staff loan management platform, effectively streamlining multiple organisational processes.
- Overhauled the website interface to boost student enrollment rates and foster greater community engagement through user-friendly design and targeted content.
- Created a robust internal intranet, simplifying access to essential tools and significantly boosting staff productivity.
- Modernised the ticket management system, resulting in quicker response times and faster resolution, thereby elevating staff and student satisfaction.

#### University Projects

##### Design of a vehicle that can traverse both Martian moons

We designed a vehicle to land on the Martian moons and take samples. This project was extensive and required the culmination of years of engineering studies.

- Systems engineering used throughout
- CAD for various prototypes and final designs
- Trajectory Modeling with Python

##### Deep Q Learning for the management of distributed satellite systems

A year long project working with RMIT to develop a Deep Q-Learning model that can manage a formation of satellites.

- Independently researched
- Developed an executable methodology
- Used Python to develop the Deep Q-Learning Model
- Cloud Computing for the training of the model

##### Re-design of a PC9 aircraft wing

Project to improve the weight and performance of the wing structure for a PC9 Aircraft.

- Extensive static and dynamic analysis
- FEA modelling of the wing and its sub-structures
- Mitigation of the effects of fatigue and barely visible damage
- Composite design and testing

### Extracurricular Activities

#### Independent Developer:

- Develop apps and games as skill improvement projects
- Acquired development skills through self-directed learning
- Projects are published on [www.jaydickson.net](http://www.jaydickson.net)

**ITS Hackathon** - Multi-year participant in the ITS Hackathon

**Science Communication** - Writer of articles on Medium to develop written skills

**Australian Tennis Open** - Participated as a customer experience ambassador