Jay Dickson

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Skills

Design and Analysis: AutoCAD, Fusion360, eLaminate, Abaqus CAE, SolidWorks, Catia, Simulink, XFOIL
Programming: Python, JS, C#, SQL, Java, R, MATLAB, React, HTML, CSS
Software: Git, Google Admin, Active Directory, Unix, WordPress

Education

Bachelor of Aerospace Engineering from RMIT — Graduated July 2024

Electives

Autonomous Systems, Foundations of AI, Spaceflight Systems Design, Computer Integrated Manufacturing

Experience

Digital Technology Officer at Saint Martin of Tours School — March 2019 – Present

Responsibilities

- Oversee the integration and management of 300+ Chromebooks into classrooms
- Perform repairs and maintenance on 500+ devices to ensure all equipment is functioning properly
- Setup and maintain user accounts for 70 Staff and 500 Students using **Google Admin** and **Active Directory**
- Organise and manage 15+ user groups to facilitate access control and staff collaboration

Projects

- Transformed the Infiniti library loan system into an efficient technology loan management tool, streamlining loan processes for over 500 devices and enhancing tracking capabilities, which improved asset utilisation by 70%
- Built a custom **WordPress** site for internal idea testing, expediting a cost-effective website overhaul by an external company reducing development time by 2 months
- Facilitated move to the Freshdesk ticket management system, which features internal notes that helped reduce communication errors by 80%, and contributed to a resolution efficiency of 95%

Standalone Projects

jaydickson.net

- Maintain a personal portfolio made with **React**, **JS**, **HTML** and **Tailwind**
- Allows for the showcasing of personal projects and university assignments

data-and-dragons.vercel.app

- Building a note taking site for tracking story progression, characters and other miscellaneous notes for tabletop roleplaying games
- Front-end uses **React** and **Tailwind** deployed on **Vercel**
- The backend leverages a **MySQL** database hosted on a **DigitalOcean VPS** and accessed via a front-end API

Assorted Minor Projects

- Developed a version of the classic Minesweeper game using a breadth-first search algorithm to efficiently expand cells and uncover the game board
- Created a simulation of satellite orbits based on Newtonian mechanics, incorporating path tracing to analyse and visualise orbital dynamics
- Designed a pathfinding simulation that leverages a genetic algorithm to iteratively improve and optimise navigation paths
- Implemented a maze generation tool employing Prim’s Algorithm to create intricate mazes