Software List

Following are the names and brief descriptions of the software used throughout the project:

* Google Drive
  + The shared file storage system was essential for accessibility and collaboration. Functionality for document creation was also used for presentation preparation, note taking and brainstorming.
  + Free online service - accessed through university Google accounts.
* Microsoft Office Suite
  + The Word and Powerpoint applications were useful for report writing and slideshow presentations respectively. They generally create a slightly more refined finish than Google Drive.
  + Licensed through the University of Auckland - free for students.
* Overleaf
  + Useful tool for creating an organised and polished final report. Outputs a professional looking document.
  + Licensed online software through the University of Auckland - free for students.
* Autodesk Inventor Professional 2019/2021
  + 3D CAD modelling software for creating designs, printable parts and renders.
  + Licensed through the University of Auckland - free for students.
* PrusaSlicer
  + Open-source slicing software for generating a 3D printable G-code file from a stl CAD file. Designed specifically for Prusa 3D printers which are used heavily by the University of Auckland.
  + Free through the University of Auckland - free for students.
* MATLAB
  + Versatile high-level programming language. Used for function calculations and image processing scripts.
  + Licensed through the University of Auckland - free for students.
* Arduino IDE
  + Open-source programming software designed to be compatible with an Arduino microcontroller. Used for stepper motor control.
  + Free downloadable software.
* Fritzing
  + Electronics circuit and PCB design software. Used for design of stepper motor control circuit.
  + Paid downloadable software.
* UR5e Robot Arm Controller
  + Built-in controller software for programming movement of a UR5e robot arm. Used for testing of routing end-effectors by moving by a manually defined path.
  + Available for use at the University of Auckland
  + Manual included in directory “\1. Project Specifications\Hardware List”