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Introduction

I am a Mechatronics Engineering student with a primary interest in robotics, embedded systems, and software development. The majority of my work and project experience has involved combining software and hardware for developing mechatronic systems along with developing software for various applications.

Education

Bachelor of Engineering (Robotics and Mechatronics)

Swinburne University of Technology Sarawak
Jan 2021 - Present | Kuching, MY

Work Experience

Alphaswift Industries - Mechatronics Intern

Cyberjaya, Selangor, Malaysia | Jun 2023 - Sep 2023

- Actively participated in drone maintenance tasks, including disassembling drones, troubleshooting electrical circuit issues in avionics, and assisting in drone test flights.
- Played a crucial role in battery management systems; developing a battery discharge rig and a battery metal box for enhanced safety, including PCB soldering.
- Programmed and debugged microcontrollers in C++ for automating the Battery Discharge Rig.

Chumbaka - Student Mentor

Remote | Aug 2022 - September 2022

- Acted as a Mentor to Highschool students in a Robotics competition.
- Guided students through Arduino code implementation and writing the reports.

Ganda Farm - Farm Supervisor

Malindi, Kenya | Apr 2019 - Sep 2019

- Assisted all staff and ensured they adhere to safety regulations.
- Enhanced skills in Customer Service, teamwork and communication skills.
- Regularly used product knowledge to meet customer's needs.

Projects

Smart-Home Fan - Computer Vision, Circuit Design, Python

Swinburne University of Technology | Sep 2023

- Developed a camera-based tracking system for an Automated Fan that adjusts its orientation and speed based on human presence.
- Applied Python for human detection algorithms and C++ programming for motor control.

Digital Calculator - Embedded C, Assembly, Electronics

Swinburne University of Technology | Nov 2022

- Utilized breadboarding, Real-time Micro-controller and programming to design and implement a Digital Calculator.
- Optimized Nokia 6100 LCD Screen and Keypad for display and user experience.
- Utilized sensors and buzzers to enhance realness and feedback to user.

CyberMask Project - Solidworks, FEA Analysis

Swinburne University of Technology | Jun 2021

- Designed a futuristic strapless mask as part of a group project using Solidworks.
- Created multiple part files using Solidworks, assembled them.
- Performed Static study, Design Study and Topology Study to the design on Solidworks Simulation.

Citizenship

Kenyan

Skills

Robotics

Embedded Systems
UNIX (Linux)
ABB Industrial Robots

Programming

MATLAB
Python3
C / C++
Assembly
LaTeX

Software

Solidworks
Microsoft Office
NI MultiSim

Manufacturing

Wiring (soldering, crimping .etc)
Power and Hand Tools

Languages

Swahili (Native)
English (Proficient)
Arabic (Intermediate)

Non-required Coursework

Undergraduate

ROS (Robot Operating System)
Software Development

References

Ting Sie King, Senior Lecturer
Faculty of Engineering, Swinburne

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