

Jonathan Tynan

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Objective

An aspiring embedded systems and robotics engineer seeking an internship to apply my strong technical expertise in hardware integration, C/C++, and embedded programming. Passionate about developing innovative solutions and eager to contribute to cutting-edge projects in embedded systems and robotics.

Education

Deakin University , BS in Computer Science	2022 – present
<ul style="list-style-type: none">• WAM: 75.95• Coursework: Object-Oriented Development, Advanced Embedded Systems, Data Structures and Algorithms, Computer Systems, Concurrent and Distributed programming, Advanced Algorithms	
TAFE Illawarra , Tertiary Preparation Certificate	2013 – 2013

Experience

Co-Founder , Propamanda Productions – Wollongong, NSW	Dec 2017 – present
<ul style="list-style-type: none">• Co-founded and developed a successful art business, overseeing all aspects from concept to realization, reflecting a solid understanding of entrepreneurship and management.• Managed finances, inventory, and logistics of the business, demonstrating strong organisational and administrative skills.• Launched a user-friendly website and integrated e-commerce platform, boosting online sales and enhancing customer experience.	
Powder Plant Operator , Customised Coffee Brands – Unanderra, NSW	Oct 2018 – Feb 2022
<ul style="list-style-type: none">• Spearheaded the operation of a beverage powder production plant, consistently meeting the target of producing 1.5 tonnes of product daily, showcasing strong leadership and time management skills.• Enhanced the efficiency of the plant by streamlining machine breakdown and part cleaning procedures, reducing the production turnaround time from 3-4 days to 1-2 days, highlighting process optimisation skills.	
Online Team Member , Coles – Shellharbour, NSW	Dec 2014 – Dec 2017
<ul style="list-style-type: none">• Exceeded quick and accurate picking of over 50 customer orders per 3 hour shift.• Orchestrated product substitutions to any item within an order, ensuring substitutions were correct and of similar value.• Coordinated loading of up to 500 orders split between several delivery trucks.	

Projects

Spice Management System	SpiceManagementSystem
<ul style="list-style-type: none">• Developed an automated spice retrieval system integrating hardware and software components.• Implemented an Arduino Nano 33 IoT-controlled motor to rotate a turntable, positioning the desired spice for user retrieval.• Created a Raspberry Pi GUI for user interaction, allowing selection of spices, inputting names when loading, and clearing positions when retrieving.• Added voice command capabilities for hands-free operation.• Developed an Android app to remotely view loaded spices, enabling users to check inventory while shopping.• Designed and provided STL files for 3D printing required structural components.• Tools Used: Arduino, Raspberry Pi, C++, Python, Java, 3D Printing	
SplashKit Enhancements	Thoth-Tech/splashkit-core
<ul style="list-style-type: none">• Developed a remote-control module for the SplashKit SDK, enabling users to control Raspberry Pi GPIO pins remotely from applications on other platforms.• Created comprehensive tutorials on GPIO usage, supporting beginner developers.• Fixed bugs in the SplashKit transpilation tool, including handling negative enumerations and migrating Docker	

containers to maintain tool reliability.

- Tools Used: C++, Python, Ruby, Raspberry Pi, Docker

Computer-Vision Object Detection Robot

[CV Object Detection](#)

- Developed an interactive vision-based robotic system that plays with cats using object detection, showcasing robotics and AI integration.
- Tools Used: Arduino, C++, Python, TensorFlow

Feline Feeding Habits Monitoring

[Feline Feeding Habits](#)

- Built a weight-based feeding station that helped to monitor and control feeding habits of cats, and collecting data for analysis to ensure healthy eating patterns.
- Tools Used: Arduino, C++

Technologies

Languages: C, C++, C#, Python, Zig, HTML, CSS, JavaScript, Ruby, Java, SQL

Technologies: Arduino, Raspberry Pi, Git, Linux, Docker, MS Office Suite