

ADNAAN BUKSH

ELECTRICAL ENGINEERING / COMPUTER SCIENCE (CYBER SECURITY)
AT THE UNIVERSITY OF QUEENSLAND

0410 836 998 adubuksh@gmail.com [My LinkedIn](#) [Online Portfolio](#)

SUMMARY

Electrical and Computer Engineering undergraduate with a major in Cyber Security, passionate about contributing to renewable energy transitions and ensuring the security of digital systems. Skilled in programming, microcontroller development, and circuit design. Actively seeking opportunities to apply my knowledge in real-world projects integrating electrical engineering and cyber security practices.

EXPERIENCE



Academic & ITLC Tutor – ENGG1001 / EECS Learning Centre

Feb 2025 – Ongoing

- Conducting weekly tutorials covering programming fundamentals, algorithm design, and data modelling using Python for ENGG1001.
- Facilitating drop-in support sessions and helping students via EdStem across up to 3rd year level courses, focusing on algorithm decomposition, debugging, and problem-solving skills for these challenging subjects.



Treasurer – MSA UQ Club

Feb 2026 – Ongoing

- Secured sponsorship from businesses, negotiating agreements and managing club finances and budgeting.
- Coordinated with committee to plan activities, allocate resources, and maintain financial records.



NOJA Power – Undergraduate Engineer

Jul 2024 – Feb 2026

- Conducting quality assurance and testing for the Device Configuration Manager (DCM) application by identifying, reporting, and providing solutions for bugs to enhance software reliability and performance.
- Developing automated security infrastructure to ensure robust protection and system integrity.



GE Aerospace – Explore Engineering Virtual Experience

Aug 2023 – Dec 2023

- Analysed alternative energy sources for propulsion systems, cost, energy density, and design trade-offs.
- Researched turbofan engine parameters including bypass ratio, noise, and emissions.



Engineers Australia – Electrical Engineering Virtual Internship

Oct 2023 – Nov 2023

- Evaluated power consumption, automation, and photovoltaic energy solutions.
- Ensured compliance with international engineering standards.

EDUCATION



The University of Queensland

Jan 2022 – Oct 2026

Bachelor of Engineering (Honours) / Computer Science

Majors: Electrical Engineering, Cyber Security

GPA: 6.3

- Experienced in Python, Java, C, Assembly, microcontrollers, signal processing and circuit design.
- Full portfolio of projects available at [Adnaan Portfolio](#).



Dalian Neusoft University of Information

Jun 2025 – Jul 2025

Five-week entrepreneurship program (China)

- Led technical development of core *Style 404* features in React and Node.js, integrating image recognition APIs and local weather data.
- Awarded **Overall Winner** and **Best Innovation Award**.



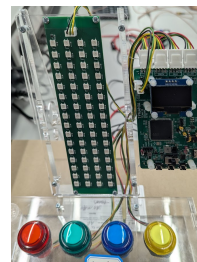
Nanyang Technological University

Jun 2024 – Aug 2024

Short-term exchange – EE5084 Cyber Security

Grade: 5/5

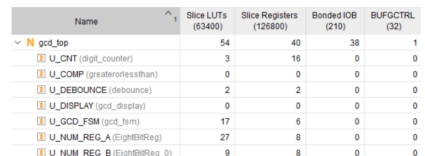
Professional Skills: Tutoring, technical communication, leadership, teamwork, problem-solving, documentation, adaptability, focused mindset, time management, bilingual communication.



Built an **STM32F429** embedded **rhythm game** with audio playback, LED beat prompts, scoring, combo tracking and PC communication.

Used **C**, **FreeRTOS**, **WS2812B LEDs**, SD card WAV playback, TSQ sequence parsing, I2S/DMA audio and UART/USB communication.

Delivered a functional hardware/software game system combining real-time scheduling, audio synchronisation, user input timing and portable power management.

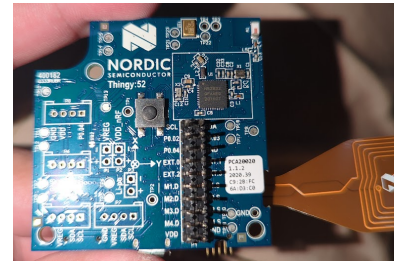
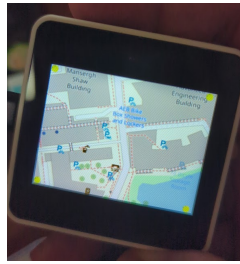


Developed a staged **digital systems and FPGA portfolio** covering logic design, arithmetic systems, FSM/datapath design and DSP architectures.

Used **VHDL**, **Vivado**, **MATLAB/Simulink** and **HDL Coder** for K-maps, BCD arithmetic, a GCD engine, FIR filtering and approximate DFT spectrum sensing.

Build and verified modular FPGA designs with self-checking testbenches, fixed-point modelling, FPGA-in-the-loop validation, pipelining and timing optimisation.

Data Muling for Disaster Relief Sensor Mapping



What?

Contributed to a **disaster relief sensor mapping system** for collecting and visualising environmental data from distributed sensor nodes.

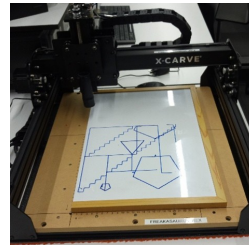
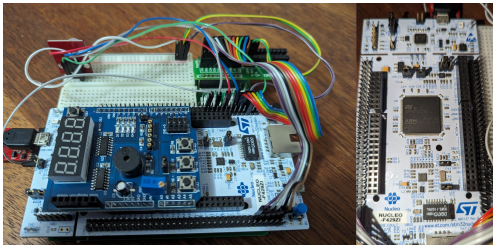
How?

Programmed **NRF/Thingy:52/EFR32MG12** devices in **C** with **Zephyr RTOS**, developed sensor drivers, BLE advertising/data collection, MQTT over Wi-Fi, UART integration and GPS tagging.

Result

Produced a real-time monitoring workflow using **InfluxDB**, **Grafana** and local blockchain logging to support location-aware environmental dashboards and data integrity.

Remote-Controlled Microscope System



What?

Developed a **remote-controlled microscope control system** for precise 3D movement, zooming, rotation and real-time user feedback.

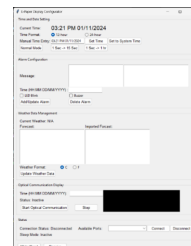
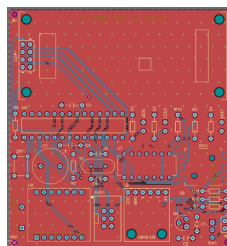
How?

Used **C**, **FreeRTOS**, **NRF24L01+** radio communication, Hamming-encoded packets, finite state machines, queues/semaphores and VT100 console visualisation.

Result

Delivered a working hardware/software system demonstrating reliable wireless control, modular embedded drivers, real-time task coordination and practical debugging of an integrated embedded platform.

E-paper Portable Digital Watch



What?

Designed and developed a **low-power e-paper watch and personal organiser** with timekeeping, weather display, alarms and optical communication.

How?

Used **Altium Designer** for custom PCB design, **C** firmware, UART communication, EEPROM storage, optical transfer and PC configuration software.

Result

Built and demonstrated a working embedded product combining PCB design, firmware, communication, hardware assembly, testing and team coordination.

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