

Ryan Agius

Embedded Engineer



About me

I am an electronics & embedded engineer with 4 years of professional experience working with a variety of projects, from small prototypes and proof of concepts, to larger commercial products.

I enjoy solving problems and learning new skills, especially those related to embedded systems.

I currently specialise in developing Embedded Linux Systems for vision and AI applications for educational, industrial and commercial use. On these systems, I have been responsible for designing their PCBs by implementing analog, digital and RF components, creating elements of their BSP, writing and testing kernel drivers, diagnosing hardware, firmware and software issues, and packaging and optimising applications for said systems.

Contact

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Languages

English - Native Language

Maltese - Native Language

Français - Basic Knowledge

WORK EXPERIENCE

SEP 2021 -
Today

AIoT Engineering Manager
SmartCow

St. Julians, Malta

I now lead a small team of Embedded Linux and Electronics Engineers to quickly develop and test hardware, firmware & software features related to SmartCow's products. This can range from recommending components to be incorporated into our products and contributing to elements of a product's schematic and PCB from the hardware aspect, developing the BSP by creating device drivers, device trees, recipes for build systems and custom kernel modules and kernel configurations from the firmware side, and writing applications to be deployed on the devices, to testing, packaging and deploying software for these devices.

To achieve this, I have frequent interactions and consultations with various other teams to improve product viability. Such a position gives me vast knowledge about the product lifecycle, which I share by creating training documents and courses for both internal and external use. This also puts me in a prime position to represent the company at various exhibitions and expos in Europe and the Middle East to discuss our products and their use cases to potential clients and industry peers, as well as to help produce presentations, blog posts and product videos for marketing purposes and sales pitches.

JUN 2021 -
SEP 2021

AIoT Engineer
SmartCow

St. Julians, Malta

Initially joining as a Machine Learning engineer, I quickly transitioned to the AIoT engineer role to fill in a knowledge gap within the company; where I would rapidly develop and test hardware prototypes to determine their viability as fully fledged products, as well as to thoroughly test and document newly announced software features related to the NVIDIA Jetson platform.

MAR 2020 -
JUN 2021

Student Engineer

Methode Electronics Malta Ltd.

L-Imrieħel, Malta

Here I helped to improve the functionality of various systems and processes in the SMT department, which focuses on automotive PCB assembly. Projects included a backup system for a number of critical Unix, Windows and Linux systems, and optimisation of a laser system for barcode etching on assembled PCBs.

AUG 2020 -
FEB 2021

Research Student

CERN

Geneva, Switzerland

I had the absolutely incredible opportunity to work with the European Organization for Nuclear Research's (CERN) Mechatronics & Robotics department as part of my Master's Degree. The main project was to implement a vision based anomaly detection system to scan the interior surface of superconducting RF cavities. As part of my work, I designed a PCB to provide custom functionality and implemented signal processing and machine learning algorithms to identify anomalous areas in the captured images.

JUL 2019 -
SEP 2019

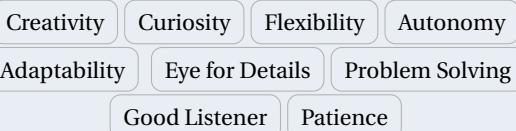
Research Student

Bern University of Applied Sciences

Burgdorf, Switzerland

I was responsible for the prototyping of two low-cost, low-power IoT systems with Bluetooth connectivity. My duties include performing simulations and cost studies of the proposed circuits, designing and assembling PCBs and performing a full characterisation on the completed systems. I also developed a library that abstracted many of the low level routines of the utilised STM microcontroller.

Skills and Strengths



Other Interests

- Cycling 🚴
- DIY 🛠
- Kayaking 🛶
- Chess ♟
- Reading 📖
- Travels 🌎

Download My CV

View the source and download this CV on  via the QR code below.



EDUCATION

2019-2021**Master of Science in ICT***University of Malta*

Followed the Master of Science in ICT: Signal Processing and Machine Learning course consisting of one year taught studies and a one year dissertation. Classes followed mainly focused on machine vision, signal processing, IOT devices and machine learning algorithms.

Dissertation: Dissertation entitled, Manufacturing Process Anomaly Detection in RF Cavities.

Degree Awarded: summa cum laude

2015-2019**Bachelor of Engineering (Hons.)***University of Malta*

Followed the Bachelor of Engineering (Hons.) in Electrical & Electronic Engineering course where I focused mainly on Radio Frequency Engineering, Digital Signal Processing, Analogue & Digital Electronics and Power Electronics.

Dissertation: Design of the Radio Front-End of a UHF Phased Array System.

Degree Awarded: summa cum laude

INFORMATION TECHNOLOGY SKILLS

Embedded Systems	Embedded Linux: <i>Advanced</i> Yocto: <i>Intermediate</i> Buildroot: <i>Intermediate</i>
Modeling and Simulation	Altium : <i>Advanced</i> QUCS : <i>Advanced</i> LTSpice: <i>Intermediate</i>
Version Control	git, github : <i>Advanced</i> SVN : <i>Basic</i>
Devops	GitHub Actions : <i>Intermediate</i> Docker : <i>Intermediate</i> Ansible : <i>Basic</i>
Office Automation	MS Office Suite (Excel, Word, PowerPoint): <i>Advanced</i> LaTeX: <i>Intermediate</i>

</> PROGRAMMING LANGUAGES

- **C:** Advanced
- **C++:** Basic
- **Python:** Advanced
- **Rust:** Basic
- **sh, bash:** Advanced

CERTIFICATES



- Fundamentals of Accelerated Data Science (*NVIDIA DLI, 2021*)
- Fundamentals of Accelerated Computing with CUDA Python (*NVIDIA DLI, 2021*)
- Fundamentals of Accelerated Data Science with RAPIDS (*NVIDIA DLI, 2021*)
- Modeling Time Series Data with Recurrent Neural Networks in Keras (*NVIDIA DLI, 2021*)
- Getting Started with AI on Jetson Nano (*NVIDIA DLI, 2021*)
- Building Video AI Applications at the Edge on Jetson Nano (*NVIDIA DLI, 2021*)
- Getting Started with DeepStream for Video Analytics on Jetson Nano (*NVIDIA DLI, 2021*)