

## Ryan Alistair Anak Allen

📍 Kota Samarahan, Sarawak ✉ ryanalistairallen14@gmail.com ☎ 012-8734367

🌐 [www.linkedin.com/in/ryan-alistair-b6126420a](https://www.linkedin.com/in/ryan-alistair-b6126420a)

🔗 <https://github.com/Ryan000319>

### SUMMARY

Fresh Graduate with a Bachelor of Engineering (Honours) (Robotics and Mechatronics) and Bachelor of Computer Science, with experience in programming languages like Python, C++, C#, React, Kotlin while also skilled in digital electronics and IOT Programming. Able to demonstrate strong leadership and teamwork through experience as a former club President and active volunteering.

### EXPERIENCE

#### R&D Intern - Sarawak Energy Berhad (SEB), Kuching (June 2023 – September 2023)

- Developed a control system for a 6 Degree-Of-Freedom Robotic Arm.
- Solved mechanical problems of the robotic arm to ensure reliable stacking and de-stacking loops.
- Gained practical experience designing components in Autodesk Fusion 360 and 3D printing.

### EDUCATION

#### Bachelor of Engineering (Honours) (Robotics and Mechatronics) and Bachelor of Computer Science (Software Development)

- Swinburne University of Technology Sarawak Campus • 3.45 CGPA • 2025 [Expected]
- Related Coursework: Mechatronics System Design, IoT Programming, Object Oriented Programming, Data Structures and Patterns

### COURSE PROJECTS

- **Visual-based Autonomous Weed Detection Robot (FYP)**
  - Built on a Raspberry Pi 5 platform (Python) with Arduino Uno and a single RGB camera to perform image inferencing.
  - Utilized YOLOv5 object detection to differentiate and detect weeds in a grid-mapping coordinate system.
- **Automated Camera Trap Image Annotation**
  - Trained a YOLOv11 object detection model to identify 61 species with 88.6% mAP.
  - Developed frontend (React/CSS) and backend routing (Node.js/Express.js) to upload camera trap images to a database.
  - Designed and 3D-printed the enclosure to house the IoT Components of the Camera Trap.
- **C++ RPG Game**
  - Developed a Text-Based RPG Game using C++ and SFML with character, items, and combat systems.
  - Implemented object-oriented design with inheritance, polymorphism, and dynamic data structures.
- **Genshin Impact Shop Mobile App**
  - Developed a custom android e-commerce shop using Kotlin, with Firebase for real-time data and Stripe for secure payments.
  - Implemented admin-side features including inventory management, real-time analytics and order tracking.

### Awards

- **Best Implemented Project** by Sunvision Engineering And Swinburne University for delivering a complete working prototype for my FYP.
- **Swinburne Emerging Leader Award (SELA)** by Swinburne University for demonstrating leadership, career development, and completion of industry training and FYP.

### SKILLS

- **Programming Languages:** Python, C++, C#, JavaScript, HTML, CSS, Kotlin, Ruby
- **Frameworks and Libraries:** React.js, Vue.js, Node.js, Express.js
- **CAD:** Autodesk Fusion 360, SOLIDWORKS
- **AI Object Detection:** YOLOv5, YOLOv11
- **IoT:** Raspberry Pi 4B, Raspberry Pi 5, Arduino Uno, AWS IoT
- **Database Management Systems:** Firebase, MySQL

### EXTRA-CURRICULAR ACTIVITIES

- **President of Rotaract Club of Swinburne Sarawak**
  - Oversaw the recruitment of 120 new members through new promotional tactics, expanding the club's reach and exposure.
  - Directed initiatives like a sign language workshop, leadership training for 70+ participants, and a tree-planting project.
  - Introduced team-building activities, such as bowling and gel blasting, fostering teamwork and collaboration.
- **Student Leadership Volunteering Program (SLVP)**
  - Orientation Week: Served as a House Leader multiple times, guiding and motivating groups of new students.
  - Event Booths: Managed booths for SLVP, engaging students and promoting club activities effectively.

### INTERESTS

- Video Games (Strategy, Open World, Adventure), PC building, 3D Printing, History Buff, Geopolitics, Cryptocurrency, Piano, Badminton

### REFERENCES

Mr. Sim Meng Hong | *Senior Engineer, Sarawak Energy Berhad*

[menghong.sim@sarawakenergy.com]