

# William Edwardo Gunawan

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## EDUCATION

Toronto Metropolitan University | Toronto, ON  
Bachelor of Science in Computer Science

Expected Graduation May 2025  
GPA:3.74

## EXPERIENCES

### Software Engineering Intern | Esportium

May 2024 - Aug. 2024

- Participate in designing and developing a scalable full stack program using **C#, ASP.NET, Typescript** and **React.js**, achieving a **25%** faster loading times and an improved user experience.
- Designed and implemented a **RESTful API** to facilitate **front-end** to **back-end** communication, improved application performance by **30%** and reduced average response time by **50%**.
- Designed and developed unit testing for controllers and services using **Moq** and **XUnit**, improving code coverage by **70%**.

### Full-Stack Developer Intern | Cove

May 2023 - Aug. 2023

- Led the design and development of the **Discord REST API** to connect technicians with tenants for housing problem resolution by enabling request processing from the Cove website to the Discord server, resulting in a **20%** reduction in API response time.
- Collaborated with cross-functional teams to integrate testing strategies into the **CI/CD pipeline**, reducing deployment times by **50%** and minimized production issues by **20%**.
- Set up and maintained **MongoDB** database for storage, retrieval, and manipulation of data, leading to improved data accessibility.

## PROJECTS

### SageAI (GenAI Genesis Google Hackathon Winner) | React.js, Node.js, Express.js, Python, MongoDB, PyTorch, VertexAI

- Managing a team of four to develop SageAI, leveraging the **MERN** framework to build an online web application platform designed to make healthcare diagnostics faster, more accurate in early disease detection, and increasing healthcare affordability.
- Developed a multi-modal AI diagnostic tool by integrating **Google-BERT** for textual symptom analysis, **Google Imagen** via **Vertex AI** for converting user-uploaded images into textual descriptions and **BiomedCLIP** for biomedical scan classification, achieving over **90% diagnostic accuracy** across **41 unique diseases**.

### TrashCam (HackTheValley 9 Hackathon Winner) | Next.js, TypeScript, PostgreSQL, Google Vision, Tensorflow, Gemini, OAuth

- Led development of a real-time waste sorting web-application using **Next.js** and **TypeScript**, increasing sorting accuracy by **85%** through AI-powered object recognition (**Google Cloud Vision & COCO-SSD**).
- Integrate **Gemini LLM** for waste classification, boosting sorting speed by **30%** and reducing contamination in recycling streams.
- Optimized data management using PostgreSQL, enabling reliable access to over **1,000** user records with fast, scalable performance.

### EcoFind | Next.js, TypeScript, AWS, Supabase, Node.js, Python, OpenAI

- Designed and developed a serverless architecture using **AWS** services such as **Cognito**, **API Gateway**, **Lambda**, and **DynamoDB**, resulting in a **40%** reduction in infrastructure costs and a **30%** increase in application performance.
- Integrated **Google Maps API** and browser-based **geolocation** services, enabling users to locate nearby 3D waste recycling facilities with **95%** accuracy, displaying distance and time estimates from the user's address to the nearest facility, significantly enhancing the application's utility and user experience.
- Developed a custom **LangChain** AI chatbot using **OpenAI**'s model, integrated with **Supabase** to store comprehensive Ecofind documentation, providing real-time support and detailed information on the application's features, functionality, and sustainability.

### ALI | React Native, FastAPI, Python, Wave2Vec, Gemini, , Langchain, PyTorch, AWS S3

- Developed an AI-powered mobile app that monitors early signs of Alzheimer's by analyzing speech patterns to reduce diagnostic errors and provide continuous cognitive health insights, resulting in improved early intervention and support for elderly users.
- Implemented a custom multiheaded-attention classifier integrated with Wave2Vec to continuously analyze speech for signs of cognitive decline, achieving a **90%** accuracy rate in early detection, leading to proactive cognitive health alerts.

### Buyvit | Node.js, Express.js, React.js, MongoDB, Jwt Authentication, Socket.io

- Led a team of 4 to develop a responsive advertisement platform for TMU students, integrating secure user authentication, a mobile-optimized interface, and an intuitive ad posting system.
- Engineered a **secure communication system** using **WebSocket**, facilitating real-time interactions between users.

### AthletX | Java, JavaFX, SQL, Oracle.

- Successfully leveraged **Oracle SQL** and **Java** to design and implement a robust data storage solution, ensuring reliable and efficient management of product data.
- Applied the **Agile Model** and **Jira** for project management and initiated standup meetings, leading to an **85%** boost in team productivity and streamlined development processes.

## TECHNICAL SKILLS

**Languages:** Python, Java, JavaScript, TypeScript, C++, C#, HTML5, CSS, SQL, Bash

**Developer Tools:** Git, Docker, Redis, AWS, Google Cloud Platform, Postman, Linux, Bash, VS Code, Jira

**Databases:** MongoDB, PostgreSQL, MySQL, Oracle, Supabase

**Libraries/Framework:** Next.js, Node.js, Express.js, React.js, React Native, Material-UI, ASP.NET, FastAPI, Django, TensorFlow, PyTorch, LangChain, Pandas, Websockets, OAuth, Spring Boot

**Interests:** Data Structure & Algorithm, Machine Learning, Hackathon, Travel, Sports, Video Games, Body-building