# William Edwardo Gunawan

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## EDUCATION

**Toronto Metropolitan University | Toronto, ON** Expected Graduation May 2025
Bachelor of Science in Computer Science GPA:3.66

## EXPERIENCES

**Software Engineering Intern | Esportium** *May 2024 - Aug. 2024*

- Participate in designing and developing a scalable full stack program using **C#**, **ASP.NET**, **Typescript**, **React.js**, and **AWS RDS** for storage**,** 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*

- Contributed to the design and development of a scalable full-stack application using **React.js** for the frontend and **Node.js** for the backend, ensuring seamless performance and maintainability.
- 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.

**Software Engineer Intern | PT. Rapier Technology International** *Jan 2020 - Apr. 2022*

- Developed and maintained **RESTful APIs** using **Flask** and designed frontend components with **React**, ensuring seamless integration between services.
- Integrated **AWS S3** storage for scalable and reliable file management, leveraging pre signed URLs to enhance security.
- Designed and set up a **CI/CD** pipeline with **GitHub Actions**, automating **unit testing** and **linter** checks, improving code quality, minimizing production issues by **25%** and increasing deployment efficiency by **40%**.

## 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 an AI diagnostic tool by integrating **BERT** for textual symptom analysis, **Google Imagen** via **Vertex AI** for converting user-uploaded images into textual description, 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.

ALI (Hack49 Hackathon Winner) | 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.

MagicQuil (CTRL+HACK+DEL Hackathon Winner) | Next.js, JavaScript, TailwindCSS, Google Gemini, Simpletex

- Developed and integrated a real-time speech-to-text functionality using **React Speech Recognition** to capture lecture content accurately, increasing transcription precision by **90%**.
- Engineered OCR and LaTeX rendering systems with **SimpleTex OCR** to process lecture slides and convert complex equations into LaTeX, enhancing the clarity of STEM content by **80%.**

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.

## TECHNICAL SKILLS

**Languages:** Python, Java, JavaScript, TypeScript, C++, C#, HTML5, CSS, SQL, Bash
**Developer Tools:** Git, Github, Docker, Redis, Apache, AWS, Azure, 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, Auth0, Spring Boot, Agile