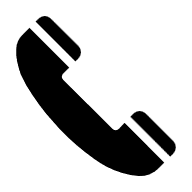
**Zachariah Loy Yiqi**

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LinkedIn: <https://www.linkedin.com/in/zachariah-loy-84a083274/>



GitHub: <https://github.com/trashprog>

**SUMMARY**

Zachariah is an aspiring data scientist pursuing a diploma at Ngee Ann Polytechnic, combining strong academic performance with practical experience in environmental tech and data analysis. Proficient in Python, SQL, and various data tools, with active involvement in AI and software development communities.

**EDUCATION Singapore**

**Ngee Ann Polytechnic**

*School of Infocom Technology | Diploma in Data Science | Minor in Internet of Things Expected Graduation, May 2026*

* **Concentrations:** Data Analytics, Machine learning, Data Engineering
* **CGPA:** 3.92/4.00, *Director’s List*
* **Related Coursework:** Data Exploration and Analysis, Machine Learning, Artificial Intelligence, Object-Oriented Programming, Statistics & Applications, Databases, Agentic Chatbot Development, Retrieval Augmented Generation (RAG)

**EXPERIENCE Singapore**

**Center for Environmental Sustainability**

*Data Analyst Oct 2024 – Feb 2025*

* Cleaning project files with power query editor and suggested improvements to storing the data Created Power BI Dashboard for Admin Senior Manager
* Creating dashboards to track Project leader and member performance

*Product Tester and Programmer Aug 2024 – Oct 2024*

* Exhibit Panel User Interface (Nextion)
* Created Power BI Dashboard for Admin Senior Manager
* Utilised Arduino for lighting using ZigBee (Mesh)

**Ngee Ann Polytechnic**

*Student helper for module creation Aug 2024 – Oct 2024*

* Created learning materials for the new module Data Lake and Data Warehouse (DLW)
* Simplified complex database concepts to help students understand

**PROJECTS**

**Agentic Compost Chatbot (Capstone Project)**

*April 2025 – August 2025*

* Built a chatbot application using Docker, PostgreSQL, LlamaIndex, AWS S3, FastAPI, ExpressJS, and React.
* Implemented user management features, including authentication, persistent chat history, and image storage.
* Designed an agentic workflow to dynamically route queries:
  + Text-to-SQL for live IoT database queries
  + Retrieval-Augmented Generation (RAG) for domain-specific composting questions
* Enabled real-time, streaming chatbot responses for improved user experience.

**Pomodoro Timer with Godot**

*Feb 2025*

* Used Gdscript – Godot’s language, to create a simple pomodoro timer
* Made features such as a movable player to interact with the start, stopping and editing the length of the timers

**Bevy Rust Game**

*Space Game – Cell War Feb 2024 – April 2024*

* Used Bevy’s Entity Component System (ECS) to Create various entities in the game.
* Applied the knowledge of vectors from Sem 1.2 module Mathematics for data science to code out physics of the bullet shots

**ACTIVITIES AND AWARDS**

**Overflow Special Interest Group (SIG)**

*Workshops attended**Oct 2023 – Dec 2023*

* Data Structures and Algorithms bootcamp 2023
* Building personal portfolio website with Figma and web development
* Docker, concepts, Dockerflies, pushing and pulling with Docker hub
* Natural language processing, the basics and exploring with a pre trained model
* Chatbot development, using PromptTemplate and LLMchain for Chatbot development

**Artificial Intelligence (SIG)**

*Plotly Playground Workshop Jun 2023*

* Used Python Libraries like Matplotlib, Plotly, Seaborn, Pandas and Numpy etc to plot meaningful data visualizations

**SKILLS**

**Programming:** Python, SQL, C#, Javascript

**Tools:** Power BI, AWS, Jupyter, Agile, Snowflake, vscode, SQL Server Management Server, Excel, Arduino, SAP GUI/Cloud Analytics, Ollama, Vim, Linux, Docker, PostgreSQL, Groq, Grafanas