

Ricardo Gao

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Skills

Web Development: C#, HTML, CSS, JavaScript, Django, React, Web Scraping, HTTP, User Interface Design, Web Services, Selenium
Programming and Data Management: Python, OOP (Object to Object programming), SQL, Git, Power Automate, MySQL, R, C#, C++, Dart, Go, JSON, Pandas, Data Structures, Data Science, Data Analytics, Requests, Matplotlib, Visual Studio, Excel
Cloud, DevOps, and Networking: Google Cloud, GitHub, REST API, Linux, CI/CD, Testing, Security, Firewall, troubleshooting

Education

Conestoga College — Software Engineering Technology

(3.93/4.0)

Professional Experience

Peer-Assisted Learning Leader for C programming

(Jan 2025 - Apr 2025)

- will focus on supporting first-year students in **mastering programming fundamentals, particularly in C**. I will organize learning activities and provide guidance to help students understand key concepts, **develop problem-solving skills**, and enhance their coding abilities.

Executive Leader of Google Developer Student Club

- Bring the **most newest skill** from google and lessons and planned and presented **various workshops** and events to help students bridge the gap between theory and practice
- Provided mentorship, helped build **community** for students to connect, learn, and grow together co-manager a **more than 500 people group** and the largest club at Conestoga College

Project

Student Management System Development

- <https://github.com/RicardoGz/student-manage-version8>
- Implemented a student management program using **C/C++** with features like adding, searching, modifying records, and saving/loading files. **Modular programming, file handling, and error management.**
- Optimized **data structures** and **sorting algorithms**, achieving a **30% improvement in data efficiency** and **20% faster file operations.**

GPA Calculation Optimization

- <https://github.com/RicardoGz/student-manage-version8>
- Developed a GPA calculator using **input validation, asynchronous data processing, and weighted GPA computation.** Achieved a **40% reduction in processing time**, with further refinements improving efficiency by an additional **15%.**

NeuroGenetic AI Optimization for Flappy Bird

- <https://github.com/RicardoGz/AI>
- Developed the Flappy Bird AI using **Python, Pygame, and the NEAT algorithm.** Utilized more than 400 lines of code to implement a **genetic algorithm-based** approach that evolves neural networks for optimal gameplay. Spearheaded the optimization of the NEAT algorithm and genetic operations through extensive testing and fine-tuning, resulting in a **50% improvement in convergence speed** and a **40% enhancement in AI adaptability.**

Full Stark RSI Stock Development

- <https://github.com/RicardoGz/own-web>
- Utilized **web scraping, JavaScript, and Flask HTTP** to create **web functionality** for a comprehensive stock analysis tool. use **Asynchronous Coroutines** and **Matplotlib**, achieving a **70% reduction** implemented advanced data processing algorithms with in processing time, with further improvements contributing an **additional 30% in time savings.**

Certificate Experience

CS50's Introduction to Programming with Python – Waterloo, ON

June, 2024 - July, 2024

- Functions Pseudocode, Operators, Scope, random, import, from, statistics, Command-Line Arguments, sys, Slices, Packages, PyPI, pip, APIs, requests, JSON, pytest, sorted, CSV, Regular Expressions, re, Classes, Objects, Attributes, Instance Variables Generators