William McVicar

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Technical Skills

Languages: Java, C++, HTML/CSS, JavaScript, SQL (Postgres), Python
Frameworks: Spring, Hibernate, Google Web Toolkit, WordPress
Developer Tools: Git, Docker, AWS, VS Code, PyCharm, Figma
Libraries: jUnit, jQuery, Matplotlib

Experience

Private Computer Science Instructor   Sep. 2022 – Jun. 2024
DHS Tutoring   *Halifax, NS*

- Mentored **20+ students** in data structures, algorithms, and object-oriented programming, focusing on Java, resulting in a **15%** average improvement in academic performance
- Provided detailed code reviews and debugging sessions, enabling students to efficiently troubleshoot issues and enhance the quality of their projects
- Designed personalized lesson plans based on each student's coding strengths and weaknesses, significantly boosting their confidence in tackling complex coding challenges

Projects

Game Swiper 🔗 | *JavaScript, Spring Boot, PostgreSQL*   Aug. 2024

- Developed an interactive platform allowing users to compare video games, with real-time updates to Elo scores, reflecting evolving user preferences and trends
- Deployed the application on **AWS EC2**, optimizing cloud infrastructure for seamless scalability and efficient handling of a growing database of 200+ games
- Used Python to automate the scraping and integration of **200+ games**, populating a PostgreSQL database for real-time Elo score calculations and global sharing across users

ParaGliders 🔗 | *Java*   Jul. 2024

- Engineered a 2D interactive game with over **6500 unique gameplay combinations**, allowing players to choose from six customizable elements and nine abilities, providing diverse and replayable experiences
- Implemented an adaptive difficulty system that dynamically increases challenge over time, keeping players engaged and maintaining a balanced gameplay experience
- Designed a modular game architecture with an in-game shop and a save/load system, enabling seamless progression and personalization for players

Portfolio Website 🔗 | *JavaScript, HTML/CSS*   Jul. 2024

- Designed and developed a personal portfolio website that highlights projects and achievements, enhancing user experience with clean, modern visuals and interactive elements
- Created a streamlined interface that organizes content effectively, providing an engaging and intuitive browsing experience for visitors

Volunteering

Peace Conference Presenter   Sep. 2024 – Dec. 2024
Dartmouth High School   *Halifax, NS*

- Delivered a keynote to over **1,000** students on entrepreneurship, inspiring the creation of socially responsible businesses that foster creativity and community impact
- Highlighted leadership and conflict resolution in peacebuilding, encouraging students to drive social change through collaboration and forward-thinking solutions

Education

University of Waterloo   Waterloo, Ontario
BASc. in Systems Design Engineering   *Sep. 2024 – May 2029*