

Brandon Mai

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Technical Skills

Languages: Java, HTML, CSS, Python, C, Bash, JavaScript, SQL, Elixir, C++
Frameworks: React, Bootstrap
Databases: Oracle, SQL Developer, MySQL, My SQL Server
Developer Tools: Git, VS Code, Visual Studio, PyCharm, IntelliJ, Eclipse, Oracle
Libraries: Collections, NumPy, Matplotlib, Mui UI

Projects

- Badminton Club Database Website** | barndonmai.github.io/badmintonclub/ Apr. 2024
- Developed a mock database management system for players, coaches and admin to simplify booking process.
 - Collaborated with four group members to innovate a **scrum-based approach** throughout three iterations of the project, refining tasks over the course of four months.
 - Integrated product backlogs, **sprint velocity charts**, test plans and test reports to optimize project efficiency.
 - Implemented account types including coaches, members, treasures and staff. Functionalities include login and sign-out, sorting accounts, managing member information, accessing coach schedules and finance.
- Mai Fitness** | mai-fitness.netlify.app Jan. 2024
- Created a Fitness Exercise gallery to showcase exercises utilizing **React, JavaScript** and Material UI.
 - Utilized hooks for website logic including getting API calls from **RapidAPI** and filtering it based on search function.
 - Developed search functionality embedded with **YouTube API** to recommend "Similar Exercises" in real time.
 - Created complex animations using React hooks such as an infinite loading bar and dropdown buttons.
- Boggle** | github.com/barndonmai/boggle-elixir Jan. 2024
- Developed a Boggle word solver using **Depth-First Search (DFS)**, designing a recursive algorithm with backtracking to explore all word combinations efficiently on a 2D board while **tracking visited cells**.
 - Leveraged Elixir's MapSet for fast lookup of valid words and implemented prefix pruning to terminate invalid search paths early, **optimizing** performance for large word lists.
- Songify** | github.com/barndonmai/songify | *Object-Oriented Programming* Apr. 2023
- Created a text-based music app in Java for managing and downloading songs, audiobooks, and podcasts.
 - Designed core functionality features such as content download, playlist creation, and playback.
 - Implemented search functionalities to filter songs by title, artist, and genre.

Education

- Toronto Metropolitan University (Formerly Ryerson University)** Graduation Date: Apr. 2026
B.Sc in Computer Science Toronto, ON
- Awards: Entrance Scholarship (95%+)
 - Relevant Courses: Data Structures, Operating Systems, Object Oriented Programming, Web Systems Development, Computer Architecture, Introduction to Software Engineering, Computer Vision, and Database Systems.

Leadership Experience

- President** Sep. 2023 – Present
TMU Chinese Student Association Toronto, ON
- Led 50+ students across six departments to ideate and execute events to engage the student community.
 - Hired a team of six executives and **delegated project deliverables** over a one-year period, achieving 50K+ digital impressions and generating \$100K in gross revenue through events.
 - Spearheaded a promotional plan to optimize a seamless scrolling user experience on digital media, ultimately boosting user engagement by 300% and achieving 50K+ views across social media platforms.
- President** Sep. 2023 – Sep. 2024
TMU Recreational Badminton Club Toronto, ON
- Wrote three Bash program scripts to **filter** and **scrape email data** from club database to organize 200+ contacts.
 - Facilitated **cross-functional communication** and operations across six departments, collaborating with Olympic athletes to promote the sport of Badminton within Canada.
 - Managed 300+ members within the club to provide seamless communication and updates on community events.