MUHAMMAD SHAYAAN ALI

mali484@uwo.ca | (548)-468-4056 | linkedin.com/in/muhammadshayaanali | github.com/shayaanali7

EDUCATION

Western University   **London, Ontario**
Bachelor of Science, Computer Science | Minor Software Engineering   **May 2027**
- Dean's Honor List 2024 | **GPA: 3.76/4.0**
- Courses: Computer Science Fundamentals, Data Structures and Algorithms, Introduction to Software Engineering, Computer Organization and Architecture, Software Tools and System Programming, Discrete Mathematics, Databases

PROJECTS

Group Finder ⬈ | Next.js, Supabase, TypeScript, Tailwind CSS, PostgreSQL, React Query   **Summer 2025**

- Built a **full-stack web application** enabling university students to create and join groups for course projects, integrating secure Supabase authentication and **real-time features** for seamless collaboration.
- Architected backend infrastructure using **PostgreSQL and Supabase** for database management, implementing **live subscriptions and database indices** to support instant messaging and reduce query response times by **10x**.
- Designed a **responsive, reusable frontend** with **Tailwind CSS** and **modular React components**, enhancing user engagement and maintaining consistent UI across desktop, tablet, and mobile devices.
- Leveraged **React Query** for intelligent data caching and background synchronization, eliminating unnecessary API calls and database requests by **25%**, resulting in instant page loads and improved user experience.
- Engineered **a robust search** and **filtering system** allowing users to discover posts, courses and peers through multi-criteria queries with dynamic filters, significantly **improving content discoverability** and **user retention**.

Algorithm Visualizer ⬈ | React.js, JavaScript, CSS   **Summer 2025**

- Designed and developed an interactive web-based tool to visualize sorting algorithms, enabling **15+ students** to explore step-by-step visualizations and improve their understanding of algorithmic logic.
- Implemented **React hooks and component-based state management** to dynamically update arrays, manage animation flow, and allow user customization such as array size, array elements, and algorithm selection.
- Leveraged **JavaScript and CSS** to develop smooth, dynamic animations that highlight each algorithm's operations, enhancing clarity of execution while ensuring responsiveness, consistency, and an engaging learning experience for users.

Virtual Pet Compaion Game ⬈ | Java, JavaFX, Scene Builder   **Winter 2025**

- Collaborated with a team of 5 to design and develop an interactive virtual pet companion by leveraging **Agile methodologies** and the **SDLC**, ensuring an engaging and educational experience that promotes responsibility and time management.
- Led the development team as **Project Manager**, organizing sprint planning sessions, delegating tasks based on technical expertise, and tracking deliverables through structured milestones to ensure timely project completion.
- Built an intuitive, visually appealing GUI in **JavaFX** while applying **design patterns** to handle user inputs, manage pet behaviors, and streamline item interactions, resulting in a flexible and maintainable architecture.

Challenger Carpet Cleaning Website ⬈ | HTML, CSS, JavaScript   **Fall/Winter 2022 – 2023**

- Built a fully responsive business website using **HTML, CSS, and JavaScript**, highlighting services, company information, owner details, and a service area map to enhance digital market presence and customer accessibility.
- Developed a **dynamic contact form with integrated email automation**, enabling seamless communication and real-time engagement with potential clients.
- Implemented modern web development best practices and **user-centered design principles** to deliver an intuitive user experience, resulting in a **20%** increase in customer inquiries and higher conversion rates.

SKILLS

Programming: Java, Python, JavaScript, TypeScript, HTML, Tailwind CSS, CSS, SQL, PostgreSQL, C, Assembly

Frameworks & Libraries: React.js, Next.js, React Query, Node.js, JavaFX

Development Tools: Git, Gitlab, IntelliJ, PyCharm, Eclipse, Visual Studio Code

Software & Platforms: Supabase, Affinity Photo, Unreal Engine 5, MS Office, Windows, Linux