

Marium Ashraf

Phone: (437) 220-1426 • E-mail: mariumashraf.MA@gmail.com • [LinkedIn](#) • [Github](#)

EDUCATION

Bachelor of Computer Engineering, Toronto Metropolitan University (2020 - April 2025)

Major in Software Engineering

Relevant Coursework: Software Design Architecture, Software Requirements Analysis and Specification, Database Design and Management Systems, Object Oriented Programming, Advanced Data Structures

TECHNICAL SKILLS

Languages: Java, Python, JavaScript, C,SQL, MySQL, MatLab, PHP, Ruby, jQuery, HTML, CSS 3, JSON

Technologies: React, Angular, Numpy, Oracle, Pandas, RESTful APIs, Node.js, Apache Cassandra and Tomcat, Excel (including VBA scripting and efficient spreadsheet design), Docker, Kubernetes

Tools: Data Analysis, Unit testing, Debugging, Visual Studio, Eclipse, IntelliJ, Netbeans IDE, Visual Paradigm

RELEVANT EXPERIENCE

Personal Projects, Toronto - Software Engineer

2019 - Present

- Engineered 'eebot', a robotic system for autonomous maze navigation, utilizing a **depth-first search algorithm** paired with a breadcrumb trail technique, achieving a 30% improvement in **pathfinding efficiency**. Deep dove into a full technical stack approach to enhance system integration and real-time operational responsiveness.
- Developed a Cell Growth Simulation application using **React**, **TypeScript**, and **Chart.js**, focusing on efficient bacterial colony visualization and grid state management. Implemented state management with React hooks and optimized simulation logic, resulting in a 25% performance improvement in rendering updates. Ensured high accessibility standards with **ARIA roles** and keyboard navigation.
- Constructed a Movie & Music Store Inventory System using **Oracle 11g & Java**, focusing on enhancing accuracy. The refined version showcased a 20% reduction in data entry errors.
- Developed Airport Flight Status Widget with **JavaScript**, **React**, and **Node.js**. With **DataStax Astra DB** integration, this project aimed to achieve a 35% faster response time in flight status queries.
- Designed a full-stack web application using **Django (backend)** and **React (frontend)**, achieving user authentication with **JWT tokens**. Addressed and resolved import errors, token handling issues, and authentication problems, enhancing web reliability .

CS/ Math Tutor, Toronto - Freelance

Sept 2021 - Now

- Elevated the academic performance of over 40 students by demystifying complex subjects, resulting in an average grade increase of 65%.
- Developed and implemented customized tutoring strategies for a diverse age range of students (8-19 years), including those with special learning needs, effectively simplifying complex concepts such as the **CSS Box Model** to enhance understanding and engagement.

Technical Support Specialist (Contract), Toronto - Go Student

Nov 2022-Jan 2023

- Resolved critical financial system log-in issues, ensuring 100% of tutors could seamlessly input bank details and receive timely payments.
- Collaborated with multidisciplinary teams using **PHP** and **Ruby** to enhance the tutoring platform and address technical issues, achieving a 30% reduction in support ticket resolution times and a 20% increase in user activity

UI Tester for Apps and Sites - Freelance

October 2020 - Present

- Conducted extensive UI testing and collaborated with UI/UX designers in over 14 live sessions to identify, discuss, and resolve system bugs, demonstrating a proactive and resilient approach in a dynamic team environment, and significantly enhancing product quality and user experience.