Uzma Ferdous

✉ uzma.ferdous@mail.utoronto.ca | 📞 647-772-8324 | ⭘ GitHub | in LinkedIn | 🌐 Portfolio

EDUCATION

University of Toronto, B.A.Sc. in Computer Engineering　　　　　　　　　　　　　　*2021 – 2026 (expected)*
- Awarded Dean's Honour List (2021/22 Fall, 2022/23 Fall)
- *Relevant courses:* Software Design and Communication (C++), Programming Fundamentals (C++), Computer Fundamentals (C), Computer Organization (ARMv7), Digital Systems (Verilog HDL), Calculus III
- *Clubs:* UofT Engineering Competition Programming Director, WISE Professional Development Marketing Director, UofT Robotics Association Team Member (Computer Vision), ECE Ambassador

SKILLS

Languages	C/C++ • Python • HTML/CSS • JavaScript • Verilog HDL • Assembly (ARMv7) • Java
Frameworks/Libraries	React.js • Node.js • Next.js • Express.js
Tools	AWS • Google Cloud Platform • Firebase • MongoDB • Docker • Git • Jira • Confluence

EXPERIENCE

Infrastructure & Cloud Operations Intern, Questrade Financial Group　　　　　　　　*May – August 2023*
- Leveraged **Jira** and **Confluence** to review code and document cloud-related set-up and maintenance procedures.
- Gained hands-on experience with **Google Cloud Platform** (GCP) and **GitLab** to manage Cohesity backup services.
- Utilized **infrastructure management** tools such as Device42 and vSphere to correct **100+** device inventory records, maintain network infrastructure, and generate detailed reports for optimizing resource allocation.

Web Developer, University of Toronto Engineering Society　　　　　　　　　　　　*January 2023 - present*
- Working in a **team of 6** on various projects such as upgrading/adding functionalities to engineering orientation website used by **1000+** incoming students with **React.js**, **SASS**, **Express.js**, **MongoDB**, **Redux**, and **Docker**.
- Created account verification and subscription system using **AWS Simple Email Service** (SES) and **JSON Web Tokens**.
- Applying agile software development methodologies through weekly tasks and code review meetings.

IT Intern, Children's Aid Society of Toronto　　　　　　　　　　　　　　　　*June - September 2022*
- Configured Checkpoint security software for **400+** Lenovo laptops and kept record of progress using **Microsoft Excel**.
- *Key achievement:* Successfully prepared **800+** laptops for deployment to office employees.

PROJECTS

'Uzma's Art Shop' – Full Stack eCommerce Website (Link → GitHub)　　　　　　　　*May – July 2023*
- Designed an e-commerce website for my paintings using **React.js**, **Next.js**, and **Styled-Components**.
- Integrated **React hooks** so users can add products to 'cart' and navigate to checkout page built using the **Stripe API**.
- Used **Google Cloud Platform**, **MongoDB**, and **AWS S3 Buckets** for storing account, order, and resource information with **CRUD** functionalities for features such as product reviews and user favourites.
- Developed a commission request system through **EmailJS** to enable users to directly send commission inquiries.

Scavenger Hunt GIS　　　　　　　　　　　　　　　　　　　　　　　　　　*January - April 2023*
- In a **team of 3**, created a GIS in **C++** to extract information from the **OpenStreetMaps API** and store street intersections, points of interest, natural features, and transit data from over 8 billion graph nodes.
- Implemented a **Trie** data structure and integrated it alongside **STL data structures** to optimize autocomplete searching and zoom rendering, increasing overall GIS responsiveness by over **20+** frames per second.
- Secured **4th** out of 90 teams on course leaderboard for our 'Travelling Courier Problem' algorithm involving **Multi-target Dijkstra**, **simulated annealing**, and **two-opt** operations, leading to a **4%** better solution than the benchmark.

ARMv7 Battleship (GitHub)　　　　　　　　　　　　　　　　　　　　　　　　*April 2023*
- Developed an interactive Battleship game in **C** for the DE1-SOC board with user interface on the VGA display.
- Utilized the Generic Interrupt Controller (**GIC**) to handle interrupts from user input for multiple I/O Devices including DE1-SOC board pushbutton keys and switches, and an external PS/2 Keyboard.
- Configured the **A9 Private Timer** to measure and display player turn countdowns and control gameplay animations.