Maher Muhtadi

Profiles: linkedin.com/in/maher-m | github.com/MaherMuhtadi | maher-m.com

EDUCATION

Master of Applied Science, Software Engineering   Post Graduate
Ontario Tech University, Canada   *September 2024 - April 2026*

Bachelor of Science, Computer Science   Undergraduate
Toronto Metropolitan University (formerly Ryerson), Canada   *September 2020 - December 2023*
- Scored a cumulative GPA of 3.96 out of 4.33
- Earned a place on the Faculty of Science Dean's List in 2021-2022 and 2022-2023
- Graduated 1 semester ahead of the academic calendar through dedication and efficient course planning
- Areas of Study:
  Data Science, Artificial Intelligence, Machine Learning, Software Engineering and Project Management,
  Human-Computer Interaction, Database Systems, Web Development, Operating Systems, Computer Security,
  Computer Networks, Data Structures and Algorithms, Computer Organization, Programming Paradigms

TECHNICAL SKILLS

- Proficient in several programming languages such as Python, Java, C, JavaScript, TypeScript, PHP, Ruby, ECLiPSE Prolog, Elixir, Haskell, Bash, Visual Basic, Perl, ASP, Pharo Smalltalk and Common Lisp

- Experienced in web frameworks such as React, Svelte, AngularJS, Vue, Django, JQuery, Chakra UI and Bootstrap

- Skilled in Data Science libraries such as TensorFlow, Scikit-Learn, NLTK, Pandas, NumPy and Matplotlib

- Adept at other languages such as SQL, HTML, CSS, SVG, XML, JSON and Markdown

- Familiar with common tools such as Vim, Git, GitHub, Visual Studio, Docker, MongoDB, MySQL and VMs

EXPERIENCES   MORE ON LINKEDIN

WebMoti Developer   Part-Time
Inclusive Media Design Centre, Toronto Metropolitan University, Canada   *September 2023 - December 2023*
- Building and upgrading hardware components of WebMoti system's Raspberry Pi robot enabling physical presence of neuro-diverse students joining in-person classes remotely
- Developing a React JS video conferencing web app using Twilio API to facilitate hybrid classrooms
- Configuring firewalls, permissions and ports of the robot to securely connect to the web app using Remote.It
- Integrating the robot's remote control interface into the web app allowing physical classroom interactions such as hand raising via the robot
- Conducting formative and summative usability tests on the web app to expose bugs and ensure intuitive design and accessible user experience for both students and instructor

Python Instructor   Part-Time
Kodland, UK   *October 2021 - October 2022*
- Instructed over 150 students of varying skill levels in Python programming language with a 100% passing rate
- Delivered lessons in digestible format based on the skill level of the students
- Evaluated student projects through code reviewing and debugging in a timely and effective manner
- Analyzed students' data structures and algorithms to provide detailed feedback for optimizing code performance
- Performed troubleshooting for virtual meetings and the Kodland IDE to ensure the smooth delivery of lessons
- Engaged parents in discussions regarding performance feedback on their children and their concerns

Senior Specialist   Part-Time
Student Learning Center, Toronto Metropolitan University, Canada   *August 2023 - December 2023*
- Received Employee of the Month in September 2023 for embodying curiosity and dedication, enriching team dynamics and demonstrating crisis management in the workplace
- Pitched a financially feasible solution that won the 'Student Life and Learning Support - Divine Design Thinking' hackathon addressing the lack of campus resource awareness among students

- Managed the production of a mini-series, played at the Staff Winter Gathering, by scripting, casting, directing, filming and editing under a tight schedule through proactive communication and planning with my colleagues
- Organizing events for the Staff Winter Gathering in collaboration with my teammates at the Holiday Committee
- Leading informative tours of the Student Learning Center to stakeholders and prospective or incoming students
- Training new recruits by imparting knowledge and expertise to ensure proper conduct of responsibilities

Specialist   Part-Time
Student Learning Center, Toronto Metropolitan University, Canada   *January 2023 - August 2023*
- Ensuring customer satisfaction by asking guided questions to identify the needs of patrons and addressing them
- Assisting with preparation, setup and tear down of events including the tracking of equipment lent out
- Roaming the building to establish staff presence and ensure all building etiquette and regulations are respected
- Monitoring and reporting security or maintenance issues on work site and minimizing any risk to the community
- Collecting and maintaining statistical data relevant in making critical operational decisions

Concierge and Security Guard   Part-Time
The Forest Hill Group, Canada   *September 2022 - February 2023*
- Conducted thorough patrols of the premises to maintain the safety and security of the residents
- Enforced access control throughout the site by securing all access points and granting entry to authorised people
- Responded promptly to emergency situations and adhered to established protocols to ensure the safety of residents
- Summarised daily activities during shifts and wrote detailed special occurrence reports following security incidents
- Reviewed pass-on logs and important announcements to carefully plan and prioritize tasks
- Logged all incoming parcels and released to recipients after verifying their identities

PROJECTS   MORE ON GITHUB

TMUPrep App   *Python, GoLang, React, TypeScript, HTML, CSS*
- Collaborated in a team of 12 to develop a course selection and advising app as the major Scrum project for a Software Project Management course
- Earned a score of 100% across all 5 sprints by demonstrating proper application of the industry-standard concepts, methodology and practice in relation to project management of IT
- Automated the scraping, parsing and storing of course data from TMU website using Selenium and MongoDB
- Created a front-end, in compliance with the Direct Manipulation Paradigm, by advantaging ChakraUI and React
- Implemented TMU student user authentication by leveraging Firebase Authentication tools

Precision Evaluation of Clustering Algorithms on Seeds Dataset   *Python*
- Led precision evaluation of clustering algorithms on the Seeds Dataset from the UCI Machine Learning Repository
- Conducted data preprocessing, including feature standardization, to optimize dataset for clustering analysis
- Implemented KMeans clustering algorithm with Scikit Learn, achieving high accuracy in partitioning the dataset
- Utilized the elbow method to determine the optimal number of clusters, enhancing clustering performance
- Visualized clustering results via Principal Component Analysis (PCA) and assessed clustering quality using Adjusted Rand Index and Normalized Mutual Information metrics

Chat App   *React, TypeScript, JavaScript, HTML, CSS*
- Enabled real-time, bidirectional and low-latency messaging between multiple users using Socket.IO
- Improved app performance by routing reusable React JS components into a Single Page Application
- Developed a robust and scalable back-end server architecture using Node.js and Express
- Designed responsive and mobile-friendly components using flexboxes and media queries
- Utilized Cloudflare's CDN, caching, DDoS protection and SSL/TLS certificates for high performance and security
- Deployed app with CapRover and hosted publicly on an Ubuntu system using Oracle Cloud Server

Natural Language Query Processor   *ECLiPSE Prolog*
- Parsed noun phrase queries, about a hypothetical chain of electronics stores, through a linguistic NLU system
- Built the database using atomic propositions in a Prolog knowledge base
- Leveraged Prolog back-chaining for results retrieval from knowledge base using grammar and lexicon rules

Online Shopping and Delivery Web Application   *PHP, JavaScript, SQL, CSS*
- Designed database in a Boyce-Codd Normal Form relation schema and implemented using MySQLi
- Created dynamic webpages through back-end PHP scripts, JQuery and JavaScript HTML DOM manipulation

- Integrated asynchronous connection to Google Maps Platform APIs for generating and displaying delivery routes
- Enforced app security by validating form submissions, using domain restricted API keys, storing salt encoded MD5 hashing or aes-256-cbc encryption of sensitive information, requiring user authentication and authorization etc

Routing Algorithms Visualizer *JavaScript, HTML, CSS*
- Implemented network building and rendering on browser with a custom graph class and Cytoscape.js library
- Applied Dijkstra's and Bellman-Ford Algorithms to calculate shortest paths for routing between network devices
- Enhanced GUI performance with asynchronous event callbacks using JavaScript Event-Driven programming

CERTIFICATIONS

Security Guard Licence
Private Security and Investigative Services, Ontario *March 2022 - October 2023*
Emergency First Aid, CPR, and AED Level C Certification
The Academy for First Aid and Safety Training *October 2021 - October 2024*