

Krishna Mehta

k54mehta@uwaterloo.ca | 647-915-1057 | linkedin.com | github.com

EDUCATION

University of Waterloo

Waterloo, ON

Systems Design Engineering (Bachelor of Applied Science)

Expected April 2029

- **Relevant Courses** - Data Structures and Algorithms, Linear Algebra, Digital Systems, Microcomputer interfacing, Circuits, Logic, Solidworks/CAD

TECHNICAL SKILLS

Software: Python, C++, Java, HTML/CSS, JavaScript, Swift, MATLAB, SQL

Tools/Frameworks: React.JS, Git, MongoDB, Pandas, NumPy, Plotly, Tkinter, Flask, PowerBI, Microsoft Office

Hardware Skills: Circuitry, Microcontroller Programming (Raspberry Pi), Soldering

Design: Solidworks, AutoCAD, Figma, Canva, Tinkercad

WORK EXPERIENCE

Undergraduate Research Assistant

April 2025 - Present

University of Waterloo - Neural and Rehabilitation Engineering Lab

Waterloo, ON

- Built EEG signal processing software in **Python** and **C++** to enhance SSVEP frequency detection for BCI systems.
- Training machine learning models like **Convolutional Neural Networks** and **Support Vector Machines** to classify SSVEP frequencies and attentional states, improving model accuracy and responsiveness.
- Optimizing BCI performance through model refinement and statistical analysis (ANOVA) on stimulus parameters.

Software Developer Intern

Jan 2025 - April 2025

University of Waterloo - CEE Department

Waterloo, ON

- Developed 20+ responsive web components such as event carousels, navigation menus, and feedback surveys in **HTML**, **CSS**, and **JavaScript** to enhance usability for 1,000+ students.
- Conducted 20+ user tests, A/B tests, and accessibility audits to optimize front-end UX, resulting in a 30% increase in session duration.
- Integrated **ARIA labels** and **alt tags** to improve accessibility and navigation for users using assistive technologies.

Director of STEM Department (Intern)

Aug 2023 - Aug 2024

City of Brampton

Brampton, ON

- Designed coding workshops for **Python**, **JavaScript**, and **Java** to teach foundational programming, improving student engagement and skill development.
- Led a team of 10+ STEM instructors, organizing training sessions that increased team productivity by 20%.
- Introduced a teamwork-based STEM curriculum focused on problem-solving, increasing student enrollment by 50+.

PROJECTS

Mission Complete (HackHer Queens) | Python, Flask, Javascript, HTML/CSS, GCP

March 2025

- Built an AI-powered Chrome extension that blocks distractions by analyzing browsing behavior in real time.
- Built a **Flask** backend with Gemini AI to classify web activity and dynamically monitor and redirect tabs.

Fur and Friends (ElleHacks) | MongoDB, React.js, Node.js, Javascript, TensorFlow.js, spaCy

Feb 2025

- Created a full-stack web application using **React.js**, **Node.js/Express** and **MongoDB** to connect the elderly with volunteers and therapy pets to reduce loneliness.
- Integrated AI-based matching using TensorFlow.js, spaCy NLP, and k-NN for interest-based recommendations.

Save, Don't Stress (Hack Canada) | React.js, CSS, Node.js, Express, GCP

Feb 2025

- Developed a full-stack web app with **React.js** and **Node.js/Express** to find the cheapest groceries near users.
- Integrated Google Maps API and Google Gemini Language Processing API, and implemented Google RESTful APIs, Axios, and regex-based JSON extraction for data flow and AI responses.

Consulting: Walmart, Amazon, Switch Health | Figma, Microsoft Office, Tinkercad

Jan 2023 – Dec 2023

- Consulted with multiple companies in medical and consumer sectors on **software solutions** for sustainability, innovation, and technological growth, designing UI/UX prototypes in Figma and IoT prototypes with Tinkercad.