

Ahmed Zafar

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EDUCATION

- **McMaster University** Hamilton, ON
 - *Major: Software Engineering; GPA: 3.95* *Projected Graduation Date: April 2027*
 - **Relevant Courses::** IBEHS 1P10: Health Solutions Design Projects
 - **Future Courses::** SFWRENG 20P3: OOP with Java, SFRWENG 2C03: Data Structures & Algorithms

EXPERIENCE

- **AI/ML Research Assistant** Hamilton, ON
 - *McMaster Biomedic.AI Labs* *May 2024 - Present*
 - Awarded National Sciences and Engineering Research Council's Undergraduate Student Research Award
 - Developing **Adaptive Cyber-Physical Systems** for **Human-AI partnership** within a surgical setting
 - Understand the **theory** behind and code machine learning models, such as **neural networks** and **support vector machine** classifiers **from scratch**
 - Interface, and process data collected using third party instruments with python scripts (using **NumPy** and **Pandas**) to train models
- **Software Engineering Intern** Hamilton, ON
 - *Arche Biotechnologies - Start-Up* *April 2024 - Present*
 - Building **Web-app MVP prototype** for Hematuria Managment Start-up to interface with electrical team's sensor components
 - Evolving web-app to full application running on a **distributed system network** to connect main and portable devices in a hospital environment.

PROJECTS

- **Machine Learning Risk Assessment Device (MLRAD)**
 - *3rd place @ McMaster University X University Of Toronto Biomedical Designathon*
 - Leveraged **TensorFlow**, **Open CV**, and **Mobilenet-v2** to build an assistive device for a community member who had survived a stroke
 - Designed, coded, and built the program to use a camera to identify high-risk items for those affected with left-side neglect visual impairment
- **Productivity Chrome Extension**
 - Building a Chrome Extension to connect Google Calendar, custom To-Do Lists, and more to new-tab screen using **HTML/CSS** and **Java script** and popular **RESTFUL APIs**.
 - Includes a Pomodoro timer to increase focus and blocks websites to **increase productivity by 40%**
- **Artificial Intelligence Electroencephalogram Communicator**
 - Uses **C++** to build a **neural network** using **Object-Oriented-Programming** to understand EEG Brain Waves
 - Classified EEG waves as letters of the English alphabet allowing those with speech impediments to communicate solely through thoughts

SKILLS

- **Languages:** Python, HTML, CSS, Javascript, C++
- **Libraries/Technologies::** TensorFlow, Matplotlib, Numpy, Pandas, ReactJS, React Native, Git, Github
- **Soft Skills:** Leadership Experience, Communication, Project Management, Outgoing, Problem-Solving