

# Ahmed Zafar

ahmedzafar.me

Github: [github.com/ahmed-z5645](https://github.com/ahmed-z5645)

Email : [ahmed.zafar5645@gmail.com](mailto:ahmed.zafar5645@gmail.com)

Linkedin: [linkedin.com/in/ahmed-zafarmcmaster](https://www.linkedin.com/in/ahmed-zafarmcmaster)

Mobile : 5194367941

## EDUCATION

---

- **McMaster University** Hamilton, ON
  - Major: *Software Engineering; GPA: 3.97* *Projected Graduation Date: April 2027*
  - **Experience::** IBEHS 1P10 **Teaching Assistant:** Taught, graded, and helped first-year students learn the engineering design process and the basics of **Python** programming as they built multi-week projects
  - **Relevant Courses::** IBEHS 1P10: Health Solutions Design Projects (Intro to Programming in Python), SFWRENG 20P3: Object Oriented Programming in Java, SFRWENG 2C03: Data Structures & Algorithms

## EXPERIENCE

---

- **AI/ML Research and Fullstack Developer Intern** Hamilton, ON
  - McMaster Biomedic.AI Labs* *May 2024 - August 2024*
  - Awarded National Sciences and Engineering Research Council's Undergraduate Student Research Award
  - Researched **Adaptive Cyber-Physical Systems** for **Human-AI partnership** within a surgical setting
  - Understand the **theory** behind and code machine learning models (**neural networks** and **SVM classifiers**) **from scratch** with an **accuracy of 92%** by interfacing, and processing data collected using third party instruments with python (using **NumPy** and **Pandas**) to train models
  - After completing my original project, contributed to a new one using **ReactJS, MongoDB, ExpressJS, and NodeJS** to build a Web-app that assesses the quality of machine-learning in research (STAR-ML)
  - Implemented **CRUD** functionality by developing **RESTful API** endpoints, multi-user functionality using **Google OAuth 2.0**, and interfaced python scripts with the Node back-end
  - Designed and coded a user-friendly front-end to accurately and efficiently display content
- **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
  - Used the **MERN Stack** and **React Native** to receive data from several sensors and process data before displaying various statistical plots continuously

## 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 (Dash-Tab)**
  - Built a Chrome Extension to replace the new-tab screen with a Dashboard using **ReactJS** and **Firebase**
  - Utilizes **Firebase Authentication, Cloud Functions, and Firestore** to create a Pomodoro timer, a focus mode, and a to-do list with **CRUD** operations
  - Generated **50+ downloads**, allowing me to integrate feedback to maintain & optimize Dash-Tab

## SKILLS

---

- **Languages:** Python, HTML, CSS, Javascript, Java, C
- **Skills/Technologies::** TensorFlow, Matplotlib, Numpy, Pandas, ReactJS, React Native, Linux, Git, ExpressJS, NodeJS, MongoDB, Firebase, Leadership Experience, Communication, Project Management, Outgoing, Problem-Solving