

# Alexander Kamil Diab-Liu

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## Profile

Goal-driven engineering student seeking a position to leverage electrical, research, and software skills to study how engineering concepts can make an impact on people's lives. Always eager to learn and looking for opportunities to develop new skills.

## Skills & Abilities

**Programming:** Python, C, C++, Linux (Bash), Windows (Powershell), SQLite3, MATLAB

**Web Development:** JSON, HTML, CSS, Django Framework, Liquid (Shopify)

**Electrical Engineering:** Multimeters, Oscilloscopes, Analog Discovery 2, Waveform Generator

**Languages:** English (Native Proficiency), French (Bilingual Proficiency), Arabic (Elementary Proficiency)

**Soft Skills:** Problem Solving, Curious Mindset, Critical thinking, Innovative solutions, Communication

## Experience

### **GPU Validation Engineer / Advanced Micro Devices (AMD)**

May 2023 - Present, Remote

- Developed Python and Ansible scripts to expedite the setup of virtual machines in the Linux KVM Hypervisor, reducing deployment times by 70% and enhancing operational efficiency
- Led successful cross-functional initiatives to package the provisioning software for cloud deployment, enabling seamless access to critical applications and services across the organization
- Conducted RAS error injection tests on superchips and effectively debugged issues
- Developed customizable automated virtualization test cases for the MI300 Data Centre chip and added specific features to optimize their execution
- Automated the implementation of machine learning models and training scripts on virtual machines with docker

### **Data Visualization Engineer / Hermes Aerospace Corporation**

Jan 2023 - Apr 2023, Remote

- Utilized Python to retrieve, clean and efficiently segment raw drone data, ensuring its accuracy for further analysis
- Created a powerful dashboard-style program that presented a 3D visualization of the retrieved data, providing valuable insights and enabling stakeholders to understand complex datasets more effectively.
- Contributed to the improvement of data analysis processes by presenting visual representations of datasets, facilitating data-driven decision-making

### **Software Programmer / LinkClicks**

Jun 2022 - Sep 2022, Remote

- Developed a robust API using Python, Django, HTML, JSON, and SQL to enable seamless integration between LinkedIn and the other LinkClicks applications (Google, Meta, YouTube, Instagram, Snapchat, Twitter, Reddit)
- Implemented a secure and intuitive user authorization process, facilitating the subsequent storage of the access token into the company's database for future reference
- Enabled the creation and retrieval of ad campaigns directly from the LinkClicks ad manager, streamlining the ad management process for users

### **Web Programmer / Werrv Inc.**

Jun 2022 - Aug 2022, Remote

- Incorporated scarcity marketing into the Shopify-based company website utilizing HTML, CSS, Javascript, and Liquid to drive conversions towards certain key products
- Employed back-end programming concepts to activate a customized stock reducing feature in certain niche scenarios (applied according to the date as well as the product SKU number and price)

## **Engineering Physics Research Assistant / McMaster University**

Apr 2022 – Jul 2022, Hamilton, ON

- Co-authored a scientific publication regarding on-site microfluidic technologies and their applications in diagnosing RNA-based viruses, published in the MDPI Biosensors Journal in 2023
- Conducted in-depth research on non-invasive energy types to stimulate acupuncture points, exploring optimal methods for effective treatment
- Aided in the research and design of a wearable biomedical device with the capabilities to stimulate acupuncture points using non-invasive energy waves

## **Health Technology Market Research Intern / Behavior**

Feb 2022 – Apr 2022, Remote

- Conducted comprehensive market research and data analysis regarding behavioral health technology stakeholders
- Developed a profound understanding of the market for wearable biomedical devices, identifying key players as well as potential areas for growth and innovation
- Utilized customer personas to understand the unique needs and behaviors of pregnant women with OUD at various stages of the marketing and sales funnels.
- Created detailed outlines and strategies to tailor marketing efforts to effectively address the mentality and concerns of pregnant women with OUD, increasing potential for successful engagement and intervention.

## **Education**

**McMaster University / Electrical and Biomedical Engineering (iBioMed)**

Sep 2021 - Present

- Dean's Honour List: Awarded to students with a GPA greater than 9.5 (3.7/4.0)

## **Projects**

**Personal Website:** [alexdiabliu.github.io/](https://alexdiabliu.github.io/)

Jul 2022 - Sep 2022

- Created and maintained a personal website to showcase engineering, programming, and biomedical projects

**Gamification Clinic: Gamified Stroke Rehabilitation**

May 2022 - Present

- Developed a sensor-based software aimed at increasing patient compliance during stroke rehabilitation through gamification techniques
- Successfully accepted to "The Clinic", the McMaster University Incubator for Health Innovation, Commercialization, and Entrepreneurship

## **Awards/Certifications**

**Engineering Research Experience Award / McMaster University**

Sep 2021

**Engineering Dean's Excellence Award / McMaster University**

Sep 2021

**Queen's Programming Challenge 1st Place / Queen's University**

Aug 2021

**Licensed Digital Marketing Master / International Institute of Digital Marketing**

Feb 2021

## **Extracurriculars**

**President / Disability Innovations, Solutions & Awareness, McMaster University**

Sep 2021 - Present

**Marketing Executive / DeltaHacks, McMaster University**

Oct 2021 - Aug 2023

**First Year Representative / McMaster Society for Engineering Research**

Oct 2021 - May 2022

**Graphic Designer / Google Developer Student Club, McMaster University**

Oct 2021 - Aug 2022