



Ian Langleben

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EDUCATION

MDCM, McGill University, Faculty of Medicine

2020 – 2024 (expected)

DCS, Dawson College

Sep 2017 – May 2019

Enriched Health Sciences.

High School Diploma, Herzliah High School

Aug 2012 – Jun 2017

CHAI Award for Academic Excellence all years.

PROFESSIONAL EXPERIENCE

Wix web designer, Jewish Community Mental Health Shabbat

Feb 2021 – Present

[mentalhealth.tbdj.org 🌐]

- Designed a modern, mobile-friendly **Wix** website for a weekend of mental health awareness
- Used Wix's Datasets feature to ensure **ease of modification and maintenance** after my contract

Wordpress web designer, PILS McGill

Aug 2020 – Jan 2021

[pils.sus.mcgill.ca 🌐]

- Designed and created a website for PILS, McGill's pharmacology undergraduate society
- Created and managed a **Wordpress** installation; wrote and managed plugins in **PHP**

Fullstack web developer, CHIME Experiment

May 2020 – Aug 2020

- Wrote frontend (**React/Typescript**) and backend (**Go**) plugins for **Grafana**, a cloud metrics system
- Redesigned the group's public website (chime-experiment.ca 🌐) with a **Gulp.js** build pipeline

Head of Boating and unit counselor, Camp Massad

Jun 2019 – Aug 2019

- Supervised a team of boating staff responsible for organizing and guarding waterfront activities
- Chaperoned a group of 10 boys for 7 weeks as a live-in counselor

Python instructor, Herzliah High School

Mar 2019 – May 2019

- Organized and taught a beginner-level course on **Python** at my high school
- Designed the curriculum and all course materials from scratch
- Covered typed and expressions, variables, user input, the Python shell, and flow control

PROJECTS

EMGkeyboard, with McGill NeuroTech 2020

Jan 2020 – Dec 2020

[DOI: [10.1109/SMC42975.2020.9283117](https://doi.org/10.1109/SMC42975.2020.9283117) 🌐]

- Helped build an armband capable of identifying finger motion using **EMG** and haptic feedback
- With the dashboard team, designed a **React** app for collecting data and testing ML models, and a hybrid **Python/Flask-Node.js** backend
- Assisted with the **recruitment and application process** for members of the incoming team

SFVentilator, Agorize Code Life Ventilator Challenge

Mar 2020

A low-cost, open-source ventilator. [github.com/ilangleben19/SFVentilator]

- Built in 3 weeks with a team of 20 for ICU use during the COVID-19 pandemic
- Designed and implemented the **React**-based UI, which ran as a **Linux service** on a **Raspberry Pi**
- Handled **serial comms** between an **Arduino** and the **Pi** with a **Node.js/Express** server

The Fifth Sense, Partner: Liana Martins-Medina

Aug 2018 – May 2019

Award-winning project presented at the 2019 Intel International Science and Engineering Fair.

- An aid device for visually impaired people. Users visualize their surroundings through surround sound. Uses a data pipeline which projects optical images of a user's surroundings into surround sound in real-time. Helps prevent head-level injuries that occur despite use of a white cane
- Hosted on a trio of **Raspberry Pi's** communicating over an **ad-hoc Wi-Fi network**
- Pipeline written in **Python** - communication handled by **Flask** servers; computer vision in **OpenCV**

Smart Arm, Partner: Adam Ben David

Oct 2016 – Mar 2017

Award-winning project presented at the 2017 Hydro-Quebec Super Expo-Sciences

- A simple upper-body exoskeleton suit for lifting heavy objects, connected to an EEG headband. The EEG headband detects when the user is blinking or clenching their jaw and controls the suit, directing it to either tense or relax
- Data pipeline involves Bluetooth communication between a **native Android app** and an **Arduino**

EXTRA-CURRICULAR ACTIVITIES

Med-1 Representative, McGill CSTAR

Oct 2020 – present

CSTAR (*Clinical Skills Training and Assessment Room*) is a McGill Medicine club.

- **Organize the logistics** of monthly clinical skills workshops for students in my class
- Promote the workshops on **social media** and via internal publications

Med-1 Representative, McGill MDJA

Oct 2020 – present

MDJA (*Medicine and Dentistry Jewish Association*) is a McGill Medicine club.

- Plan educational and cultural events tying Judaism and Jewish life into medical education
- Promote these events to both Jewish and non-Jewish medical and dental students in my year

Medical student researcher, MNI NeuroSim group

Sep 2020 – present

- Assist an MSc student with the **logistics and data collection** of a trial focusing on the effectiveness of VR neurosurgery simulations in training prospective surgeons
- Wrote a detailed **protocol** for the trial
- Trusted to **run the trial** for participants when the MSc student is unavailable
- Enhance the group's **Wordpress** site (neurosim.mcgill.ca) with custom **PHP/HTML/CSS** plugins

First Aider, St. John Ambulance

Feb 2019 – present

- Volunteer at events such as hockey games, fundraisers, and concerts as a first aider
- Attend monthly CPD workshops on first aid situations
- Trained in crisis management, communication, and teamwork

VP Technology, MDSA Fashion Show for ANEB

Nov 2019 – May 2020

A fundraiser fashion show run for Anorexia et Bulimie Quebec by McGill's Medical-Dental Students' Association.

- Handled **social media, communication and registration** for the 2020 edition of the show
- Personally **organized a secondary fundraiser** for 80 at a board games bar venue

Year Rep, Dawson College, Enriched Sciences program

Sep 2018 – May 2019

- **Organized activities**, such as a Valentine's Day event and a talent show, for peers in my program
- Balanced the load of schoolwork with the responsibility of representing my peers

President, Hillel, Dawson Chapter

Aug 2018 – May 2019

- **Oversaw a team** of 12 responsible for the promotion of Jewish life and presence on campus
- **Organized events** for Jewish holidays and charitable causes.

Organizer of MariHacks, the first CEGEP-level hackathon

Jun 2018 – Mar 2019

- Responsible for technology and content
- **Recruited** educators and mentors via personal networks and LinkedIn
- **Communicated** with them regularly in a professional manner

Junior Counselor, Diller Teen Fellows

Sep 2017 – Sep 2018

- Co-led a 3-week trip to Israel and a 10-day trip in Montreal for a group of 20 Israeli teens
- Created and ran content-rich activities attended by up to 300 people
- Honed leadership skills, explored Jewish culture and heritage, and fostered will for social activism

Co-founder of Secret Word, Herzliah High School

Dec 2016 – Jun 2017

- Created a school-wide game to stimulate student interactions and improve spirit in my high school
- Designed a Java app to facilitate all aspects of running the game.

ACHIEVEMENTS AND AWARDS

Intel International Science and Engineering Fair

May 2019

For The Fifth Sense

- Oracle Academy Award for Outstanding Project in the Systems Software Category
- Second Award in the Physical Sciences: Systems Software Category
- GoDaddy Joining Forces for the Community Award

Montreal Regional Science and Technology Fair

Mar 2019

For The Fifth Sense

- Gold Medal (Senior 2 category)
- Super expo-sciences Hydro Québec Experimentation & Design Award
- Concordia School of Engineering and Computer Science Innovation Scholarship
- Intel Excellence in Computer Science Award
- McGill University - School of Computer Science (Non Robotics) Award
- McGill Faculty of Engineering Award

Lieutenant Governor of Quebec's Youth Medal

May 2017

Awarded for academic achievement and for outstanding personal and social involvement.

The Ronald W. Dalfen Memorial Scholarship,

May 2017

Herzliah High School

Awarded for incorporating computer technology in service to the community.

First Place, QAIS Public Speaking Competition

A city-wide public speaking competition.

- *Best Senior Speech* (2015)
- *Best Junior Speech* (2013)

PUBLICATIONS

A 3D-Printed, Adjustable Armband for Electromyography-Based Finger Movement Classification With Haptic Feedback, IEEE (Dec. 2020)

See *EMGkeyboard* under *Projects* above. DOI: 10.1109/SMC42975.2020.9283117 [↗](#)

COURSES AND CERTIFICATES

Standard First Aid, St. John Ambulance

Feb 2019 – Feb 2022

Certified for emergency management, general First Aid, CPR level C, and administration of AED.

Certificate of Success for Studies in Piano,

2010 – 2017

McGill Schulich School of Music

Secondary V level in classical piano. Awarded Distinction in 2017, and High Distinction in 2010-2016.