# 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.

## 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.

**National Lifeguard,** *Lifesaving Society* — Jun 2018 – Jun 2020
Poolside safety and emergency management.

**Standard First Aid,** *Lifesaving Society* — Oct 2016 – Oct 2019
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.

## PROFESSIONAL EXPERIENCE

**Wordpress 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

**Frontend web developer,** *CHIME Experiment* — Jun 2017 – Jan 2018
- Designed, built, and maintained the website of the CHIME Experiment at chime-experiment.ca ↗

# PROJECTS

### The McGill Nightly, *webmaster*
<div align="right">Oct 2019 – present</div>

*A satirical campus newspaper I run with friends.* [mcgillnightly.ca ⧉]

- Designed the website according to **Material Design** principles with no libraries or dependencies
- The website is **statically generated** from an **SQLite** database by a **Gulp.js** pipeline which optimizes images, minifies scripts, and generates **structured data** for **SEO**
- Content hosted on **Firebase Hosting**; article view counts stored in **Firebase Realtime Database**

### EMGeyboard, *with McGill NeuroTech 2020*
<div align="right">Jan 2020 – Dec 2020</div>

[**DOI**: 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

### SFVentilator, *Agorize Code Life Ventilator Challenge*
<div align="right">Mar 2020</div>

*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*
<div align="right">Aug 2018 – May 2019</div>

*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*
<div align="right">Oct 2016 – Mar 2017</div>

*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 MDJA*
<div align="right">Oct 2020 – present</div>

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

### Med-1 Representative, *McGill CSTAR*
<div align="right">Oct 2020 – present</div>

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

### Medical student researcher, *MNI NeuroSim group*
<div align="right">Sep 2020 – present</div>

- 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
- Enhance the group's **Wordpress** site (neurosim.mcgill.ca ⧉) with custom **PHP/HTML/CSS** plugins

### First Aider, *St. John Ambulance* <span style="float:right">Feb 2019 – present</span>
- 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* <span style="float:right">Nov 2019 – May 2020</span>
*A fundraiser fashion show run for Anorexie 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* <span style="float:right">Sep 2018 – May 2019</span>
- **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* <span style="float:right">Aug 2018 – May 2019</span>
- **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* <span style="float:right">Jun 2018 – Mar 2019</span>
- 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* <span style="float:right">Sep 2017 – Sep 2018</span>
- 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* <span style="float:right">Dec 2016 – Jun 2017</span>
- 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 <span style="float:right">May 2019</span>
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 <span style="float:right">Mar 2019</span>
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 <span style="float:right">May 2017</span>
Awarded for academic achievement and for outstanding personal and social involvement.

### The Ronald W. Dalfen Memorial Scholarship, <span style="float:right">May 2017</span>
*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 *EMGeyboard* under *Projects* above. DOI: 10.1109/SMC42975.2020.9283117 ⬈

## COMMUNITY SERVICE

**Head Bimah Boy,** *Shaar Hashomayim synagogue*                          Oct 2013 – Oct 2019
- Oversaw logistics of weekly religious services with up to 2500 attendees

**Student Ambassador,** *JNF Canada*                          2018 – 2019
- Recruited and managed volunteers for the JNF's Tree-a-Thon
- Personally raised over $5000 for reforestation in Israel

## SKILLS

**Javascript/Typescript**
*Experienced with both client (vanilla, React) and server (Express, Node APIs).*
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**Google Firebase**
*Comfortable with Authentication, Database, Firestore, Functions, and Hosting.*
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## LANGUAGES

English ●●●●●

French ●●●●○

Hebrew ●●●●○

Spanish ●●○○○

## INTERESTS

Basketball  ●  Cooking and baking  ●  Chess