

Juliette Regimbal

Education

- 2020–Present **M.Sc. Electrical Engineering**, *McGill University*, Montréal QC.
Master of Science in Electrical Engineering. Supervised by Professor Jeremy Cooperstock.
- 2015–2020 **B.Eng. Computer Engineering**, *McGill University*, Montréal QC.
Bachelor of Computer Engineering. J.W. McConnel Scholarship. GPA of 3.30.
- 2011–2015 **High School Diploma**, *Watchung Hills Regional High School*, Warren NJ.
High school completed with courses focusing on basic engineering, math, and science. Independent research done in final year. Graduated as member of the National Honor Society with a GPA of 3.86.

Experience

Vocational

- January **Independent Consultant**, *Measuring Polyphony*.
- 2020–Present Software developer for the Measuring Polyphony project directed by Karen Desmond. Tasks focused on development of the Measuring Polyphony Editor for human entry of mensural-notation music from an existing manuscript available via IIF.
- May **Casual Research Assistant**, *Schulich School of Music*, Montréal QC.
- 2018–Present Software developer for the *Single Interface for Music Score Searching and Analysis* project at the Distributed Digital Music Archives and Libraries Lab. Specifically working on corrections in optical music recognition by contributing to Verovio and developing the online square-notation music editor Neon.
- May–June **Stagiaire**, *Matrox Electronic Systems Ltd.*, Dorval QC.
- 2016 Worked in Video Products Group with software engineers.
Worked in a team towards the release of a new version of their SDK, and on new features for later versions.
- Summer **Intern**, *Thorlabs, Inc.*, Newton NJ.
- 2012, 2013, 2014 Conducted experiments to verify the specifications of imaging and optics equipment under supervision of trained engineers and scientists. Projects include finding the transmission curves of bandpass filters, the source and behavior of a noise pattern in a CCD camera for life science use, and the emission spectra of a fluoride fiber optic cable to investigate the potential to use it in a near-IR optical pump.

Miscellaneous

- 2017 **French Courses**, *CSDM - Centre Saint-Louis*, Montréal QC.
Levels 5 and 6 of the *Échelle québécoise des niveaux de compétence en français des personnes immigrantes adultes*.

2011–2015 **Programmer**, *FIRST Robotics Team 41*, Warren NJ.

Participated as member and lead programmer. Provided experience with hand tools, electrical equipment, and C++ programming. Administration experience by helping organize a growing team and teaching younger students how to program in C++.

Languages

English Native

French Intermediate

Niveau 6, Échelle québécoise des niveaux de compétence

Computer skills

Programming Languages C/C++, JavaScript/Typescript, Python, Java, Rust ,VHDL, Haskell, x86_64 and ARM assembly

(by proficiency)

Familiar With UNIX-like systems (especially Linux), Scrum-style Agile, FPGAs, Microcontrollers, and Git

Projects

2019 **OR and ICU Haptic Alarms**, *B.Eng. Capstone Project*.

The high amount of noise in hospital environments caused by medical alarms is detrimental to both clinicians and patients. Reducing this noise could greatly improve the well-being of clinicians and medical outcomes for patients. The project sought to do this by developing a haptic display using one vibrotactile actuator capable of conveying the states of three vital signs continuously and in parallel. Supervised by Professor Jeremy Cooperstock.

2015 **Blade Flapping in Quadrotors**, *Independent Research*, Warren NJ.

Conducted individual research into blade flapping angles in small quadrotors and their effect on stability. Research involved designing programs to monitor the rotational velocity of the rotor, modelling expected flapping angles using existing works, and numerous experiments in a wind tunnel. The project specifically focused on how varied accelerations might cause deviation from typical models. Supervised by Dr. Sophia Gershman.

Presentations

J. Regimbal, “Neon.js after v3: How to move forward with OMR visualization and correction of full manuscripts.” Workshop on SIMSSA XVIII.

J. Regimbal, Z. McLennan, G. Vigliensoni, A. Tran, and I. Fujinaga, “Neon2: A verovio-based square-notation editor.” Music Encoding Conference 2019.

J. Regimbal and C. Hutnyk, “Neon: Full manuscripts, lyrics and staves.” Workshop on SIMSSA XIX.

J. Regimbal, G. Vigliensoni, C. Hutnyk, and I. Fujinaga, “IIIF-based lyric and neume editor for square-notation manuscripts,” in *Music Encoding Conference Proceedings 2020*, pp. 15–18, 2020.

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J. Regimbal, N. Radi, A. Weill-Duflos, and J. R. Cooperstock, "Single-actuator simultaneous haptic rendering for multiple vital signs," in *HCI International*, (Copenhagen, Denmark), July 2020.