ALEXANDRE HERBAY

Researcher at the convergence between computer science, data science and cognitive neurosciences

📞 514 918 7269
✉ alexandre.herbay@mail.mcgill.ca
🌐 www.alexandreherbay.com
📍 3099 rue Anne-Hébert, Montréal, H1N0A4
in alexandre-herbay
⌨ aherbay

| PROFESSIONAL EXPERIENCE

R package developer   2019 -

- Creation and development of the new R package *ERPscope* allowing to easily visualize and analyze event-related potentials (a neuroimaging technique based on EEG). The code and the documentation are available on www.erpscope.org

Mobile application developer   2016 - 2022
Child Phonology Lab & DIALSpeech

- Design, full development, maintenance and management on the AppStore Connect of three iPad applications, based on Ionic, Angular, and HTML-CSS-Javascript technologies
    - ➡ Phophlo, SAILS et SAILS Flex available on iOS for iPad
- Development of the www.dialspeech.com website to present the applications and user guides
- Design of logos and visual identity for the apps and the website
- Creation of user interfaces compatible with clinical constraints and those of a school environment
- Supervision of a student for the development of an application based on Flutter technology

Research projects supervisor   2014 - 2021
Université de Montréal & McGill University

- Training and supervision of 22 undergraduate students and one graduate student in research projects in neuroscience, speech-language pathology and developmental psychology
- Supervision in the definition of their research project, compilation, cleaning and analysis of data, statistical models, preparation of scientific abstracts and posters, training in conference presentation, and supervision in the writing of a final report in the form of a scientific article
- Training in the use of online experimentation platforms, recruitment & management of participants in online scientific experiments and electroencephalography

Lecturer   2018
School of Communication Sciences & Disorders - McGill University

- Teaching the 'Research Methods and Measurement' seminar of the Master of Speech-Language Pathology program
- Created new course materials, organized practical activities and evaluations over 13 weeks
- Introduction to programming in R and the use of statistics in a clinical research context

| EDUCATION

Ph.D. in Communication Sciences & Disorders
McGill University, Canada
2014 - 2022
tinyurl.com/herbay-thesis

B.Sc. in Linguistics & Psychology
Université de Montréal, Canada
2010 - 2014

B.Sc. in Fundamental Computer Science
Université Paul Sabatier, France
2007 - 2011

| SKILLS

Languages
French (native language)
English (professionnal)

Software development
HTML / CSS / JavaScript
Angular / Ionic / Flutter / Xcode
Unix, git & Github

Data science
R / Shiny R / Matlab / Python / Excel
Mixed linear regression models & bayesian approaches

Scientific research
EEG Experiment & analyses
Online experiments (Gorilla.sc)
Scientific communication

Professional
Excellent communication skills
Team player
Developed autonomy & self-training

I PROFESSIONAL EXPERIENCE (CONT.)

MITACS Intern
2015

Computer Research Institute of Montreal (CRIM)

- Complete development of an online application (using Angular) running on tablets and computers, and based on an online database (CouchDB, PouchDB & Express JS)

Research Assistant
2013-2014

Laboratoire d'Acquisition et Traitement du Langage - Université de Montréal
iLanguage Lab

- HTML programming for an online application project based on the MontageJS framework.
- Mentoring of a speech-language pathology student

Teaching Assistant
2011- 2014

Linguistics & Translation Department - Université de Montréal

- Weekly tutorials, preparation of methodological worksheets, exercises, exam topics & correction for 5 linguistics and translation courses: Computer Tools for Translators (2011 to 2012), Language and Technology (2011), Notions of Syntax (2012 to 2014), Syntax (2013) and Lexicology, Semantics and Morphology (2013)

I SCIENTIFIC RESEARCH

- Since 2014, I have conducted and participated in multiple research projects focusing on brain processing of language, language development in children and immunology. The complete list of the 5 articles published in scientific journals and 19 conference presentations resulting from these research projects is available on my website.

I SERVICES TO THE COMMUNITY

Scientific Communicator
2017-2019

Brain Reach & 24 hours of science

- Organization of monthly presentations and interactive activities to introduce neuroscience to elementary and high school students.

Organizer of scientific journal clubs
2017-2018

McGill University & Center for Research on Brain, Music and Language

- Creation of the program, selection of the articles to be read and animation of the discussion for some sessions for the groups 'Artificial Intelligence & Cognitive Sciences' and 'Syntax: the experimental syntax'.

Student Representative
2016-2021

- Member of the Scientific Activity Committee of the Centre for Research on Brain, Music and Language (2016-2021)
- Departmental Representative to the Post Graduate Student Society of McGill University (2017-2019)

AEGEE-Toulouse Vice-President
2008-2010

Association des Etats Généraux de l'Europe (European Students' Forum)

- Responsible for the reception of foreign students at Paul Sabatier University
- Administrative assistance to newcomers and organization of social and cultural events

I AWARDS

**Doctoral Research Fellowship
- Ranked 1st**

Fond de Recherche du Québec
Société et culture

2018-2022

Best Presentation Award

VocUM International symposium

2019

**Editor's Award
- best published article in 2017**

Canadian Journal of Speech-Language
Pathology and Audiology

2018

Graduate Student Excellence Award

Center for Research on Brain, Music and
Language

2018

Best Scientific Poster

Symposium Plasticité, musique et
langage - 85ème congrès de l'ACFAS

2017

**Lucie Besner Fellowship for the
Study of Human Communication
Neuroscience**

School of Communication Sciences &
Disorders - McGill University

2017

Bourse Accélération

MITACS

2015-2016

**Departmental Nomination for the
Governor General's Award**

Linguistics & Translation Department,
Université de Montréal

2014

Dean's Award Recipient - twice

Faculty of Arts and Sciences,
Université de Montréal

2011 et 2012

I HOBBIES

Cooking / Climbing / Travel