elizabeth**levitis**

MSc Candidate

contact

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languages

english native speaker,
russian native speaker,
basic spanish

programming

Python, R, Bash, PHP,
MATLAB, Javascript,
SQL, LaTeX, etc.

soft skills

problem solving,
teaching, research

education

2018 – now **MSc candidate** in Neuroscience — McGill University, Montreal, QC
Thesis work supervised by Alan C. Evans and Yasser Iturria-Medina on a project entitled:
Application of an Epidemic Spreading Model to Characterize Amyloid Beta Accumulation in Autosomal Dominant Alzheimer's Disease Mutation Carriers.

2013 – 2017 **BA&Sc** in Cognitive Science — McGill University, Montreal, QC
Thesis work was supervised by Veronique Bohbot on a project entitled:
Personality Measures Associated with Spatial and Response Learning Strategies in Virtual Navigation

2019 **ReproNim Instructor Training** — ReproNim
Running workshops on reproducible neuroimaging.

experience

Academic Experience

Current Positions & Activities

05/17 – now **McGill Centre for Integrative Neuroscience (MCIN)** — Montreal, QC
Software Developer
Involved in the ongoing development of a Quality Control module for imaging and behavioral data, along with a standalone RESTful API for automatic structural MRI quality control. Duties include developing new features for the Infant Brain Imaging Study project. For thesis work I have contributed to the development of APPIAN, an automatic PET processing pipeline.

06/19 – now **Organization for Human Brain Mapping (OHBM)** — Minneapolis, MN
Hackathon Co-chair - Open Science Special Interest Group
Responsible for organizing the annual Brainhack event run by the Open Science special interest group.

Previous Positions

05 – 08/16 **Breast Cancer Informatics Group, McGill University** — Montreal, QC
Research Assistant
Continued development of a supervised machine learning algorithm in R to predict breast cancer patients' intrinsic subtypes across distinct subtyping schemes using microarray data.

01 – 06/15 **Department of Biology, McGill University** — Montreal, QC
Work-Study Research Assistant
Assisted with behavioral analysis of Zebra finch directed and undirected song between an adult and juvenile. Gained histology experience using a sliding microtome to section brain tissue and mount slices onto slides. Gained proficiency in avian care and handling.

09 – 12/14 **Department of Psychology, McGill University** Montreal, QC
Work-Study Research Assistant
Carried out neuron quantification via cFos activation in chick brains' slices using the software Stereo Investigator. Performed microscopy work to determine neural density in coronal slices.

10/13 – 04/15 **Department of Languages, Literature, and Culture, McGill University** Montreal, QC
Work-Study Research Assistant
Worked with a professor of Russian literature - tasks included translating Russian text and assisting with cross-referencing.

Teaching Experience

01/18 – now **McGill University, OHBM, ReproNim, Brainhack** Montreal, QC
Neuroinformatics Instructor
Planning and teaching of workshops introducing neuroscientists and trainees to topics pertaining to reproducible neuroimaging and neuroinformatics.

05/16 – 07/16 **McGill University** Montreal, QC
Organic Chemistry Teaching Assistant
Taught tutorials and helped grade exams for an intro to organic chemistry course.

09/15 – 12/16 **McGill University** Montreal, QC
Science Undergraduate Society Peer Tutor
Tutored peers one-on-one in courses such as intro to computer science, intro to organic chemistry, and developmental economics.

07/15 – 08/15 **Hudson Guild** New York, NY
SHSAT Instructor
Planned and taught a month-long course to prepare a group of students to ace the SHSAT, an exam taken to gain admittance to the top high schools in NYC. Assessed students' individual progress based on daily homework assignments and in-class participation.

memberships & extracurriculars

2019 – now **OHBM Open Science SIG** Minneapolis, MN
Hackathon Chair & Organizer

2018 – now **BrainReach** Montreal, QC
Neuroscience instructor for high school students % course content developer

2016 – 2017 **McGill University Bachelor of Arts & Science Integrative Council** Montreal, QC
Vice President (Academic)

2015 – 2017 **Swimability** Montreal, QC
Special Needs Swimming Instructor

2015 – 2016 **McGill Cognitive Science Student Association** Montreal, QC
Vice President (External)

2015 – 2016 **McGill Science Undergraduate Society** Montreal, QC
Peer Tutor

2014 – 2015 **Spoon University** Montreal, QC
Co-Founder & Editor-in-Chief

awards

2019	**Travel Award**	Quebec Bio-imaging Network, Montreal, QC
2019	**Instructor Training Fellowship**	Repronim, Worcester, MA
2017	**Dean's Undergraduate Multidisciplinary Research Award**	McGill University, Montreal, QC
2016	**Undergraduate Research Award**	McGill University, Montreal, QC
2016	**Tomlinson Engagement Award for Mentoring**	McGill University, Montreal, QC

interests

professional: neuroscience, translational research, cognitive science, informatics, software design, machine learning, statistics. **personal:** dance, crossfit, cooking.

publications

pre-prints

1. Spread of pathological tau proteins through communicating neurons in human Alzheimer's disease
   Jacob W. Vogel, Yasser Iturria-Medina, Olof T. Strandberg, Ruben Smith, Alan C. Evans, Oskar Hansson, for the Alzheimer's Disease Neuroimaging Initiative, and the Swedish BioFinder Study
   bioRxiv (May 2019). Under consideration at Nature Communications; contributions made during review.

invited talks & organized workshops

1. OHBM Annual BrainHack & TrainTrack
   Open Science Special Interest Group (June 2020), Organization for Human Brain Mapping, Workshop.

2. Introduction to Scientific Software Development and Machine Learning
   Healthy Brains for Healthy Lives (Feb. 2019), McGill University, Workshop.

conference posters

1. Application of an Epidemic Spreading Model to Characterize Amyloid Beta Accumulation in Autosomal Dominant Alzheimer's Disease Mutation Carriers
   Elizabeth Levitis, Jacob Vogel, Gregory Kiar, Thomas Funck, Yasser Iturria-Medina, Alan C. Evans
   Human Amyloid Imaging (Jan. 2020).

2. Structural Brain Connectivity Predicts Longitudinal Amyloid Beta Deposition in Autosomal Dominant Alzheimer's Disease Mutation Carriers
   Elizabeth Levitis, Jacob Vogel, Gregory Kiar, Thomas Funck, Yasser Iturria-Medina, Alan C. Evans
   Integrated Program in Neuroscience Retreat (Sept. 2019).

3. DeepQC: A RESTful API for Automatic MRI QC
   Elizabeth Levitis, Andrew Doyle, Armin Taheri, Leigh MacIntyre, Samir Das, Alan C. Evans
   Organization for Human Brain Mapping (June 2018).

published code

For an up-to-date list of published code projects, please visit my GitHub profile at https://github.com/llevitis.