elizabeth**levitis**

PhD 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

2020 – now **PhD candidate** in Neuroscience — University College London, London, United Kingdom | NIMH, Bethesda, MD, USA
UCL-NIMH Joint Doctoral Training Program in Neuroscience - supervised by Armin Raznahan (NIMH) and Daniel Alexander (UCL)

2018 – 2020 **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 – 08/19 **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 – 06/20 **Organization for Human Brain Mapping (OHBM)** — Minneapolis, MN
Hackathon Co-chair - Open Science Special Interest Group
Responsible for organizing the annual Brainhack event.

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.

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

09/2020 **National Institutes of Health** Bethesda, MD
BIOL 262 Instructor
Developed and taught a lesson introducing post-baccaulerate students at the NIH to neuroimaging, network neuroscience, and applications in biomedical research. Created a programming assignment for students to gain practical experience with the methods taught.

01/18 – 07/20 **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 – 2020	**OHBM Open Science SIG** Hackathon Chair & Organizer	Minneapolis, MN
2018 – 2019	**BrainReach** Neuroscience instructor for high school students & course content developer	Montreal, QC
2016 – 2017	**McGill University Bachelor of Arts & Science Integrative Council** Vice President (Academic)	Montreal, QC
2015 – 2017	**Swimability** Special Needs Swimming Instructor	Montreal, QC
2015 – 2016	**McGill Cognitive Science Student Association** Vice President (External)	Montreal, QC
2015 – 2016	**McGill Science Undergraduate Society** Peer Tutor	Montreal, QC
2014 – 2015	**Spoon University** Co-Founder & Editor-in-Chief	Montreal, QC

awards

2020-2024	**Pre-doctoral Intramural Research Training Award**	National Institute of Mental Health, Bethesda, MD, USA
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

articles in peer-reviewed journals

1. Spread of pathological tau proteins through communicating neurons in human Alzheimer's disease
   J. W. Vogel, Y. Iturria-Medina, O.T. Strandberg, R. Smith, **E. Levitis**, A. C. Evans, O. Hannsson
   Nature Publishing Group (May 2020). Nature Communications.

invited talks & organized workshops

1. Hackathons: A new space for collaborative projects and learning
   Open Science Special Interest Group Symposium (June 2020), Organization for Human Brain Mapping, Symposium and presentation.

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

3. Managing your Reproducible Experiments with Datalad and Boutiques
   ReproNim (Feb. 2020), McGill University, Workshop.

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

conference posters

1. Differentiating epicenters of amyloid-beta spread in autosomal dominant and sporadic Alzheimer's disease.
   Elizabeth Levitis, Jacob Vogel, Gregory Funck, Yasser Iturria-Medina, Alan C. Evans
   Organization for Human Brain Mapping (June 2020).

2. 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).

3. 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).

4. 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.