

MATTHEW SALACIAK

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EDUCATION

- McGill University** • Montreal, Quebec, Canada September 2020 – Expected May 2022
Masters of Experimental Medicine • Thesis: *Immune pathway profiling of immunotherapy treated Hodgkin's Lymphoma patients using Single-cell RNA Sequencing*
- Concordia University** • Montreal, Quebec, Canada September 2016 – April 2020
Bachelor of Computer Science • Major *Computer Applications and Computation Arts*
- Concordia University** • Montreal, Quebec, Canada September 2009 – April 2013
Bachelor of Commerce • Major *Marketing*

WORK EXPERIENCE

- Co-founder** Somme Collective September 2018 – Present
Montreal, QC
- Interdisciplinary collective of computer science and new media art professionals for the research, design, and production of public installations
 - Awarded the Operations Grant from Canada Council for the Arts for continued research and project development (2021)
 - Presentation of "Mycocene", a bio-kinetic installation, at Elektra Festival in Montreal, Canada (2019)
 - Presentation of "Mycocene" at the Behavioural Matter Conference in Paris, France at Le Centre Pompidou (2019)
- Co-founder** Temple Records June 2014 – Present
Montreal, QC
- International record label
 - Responsible for operations and marketing. Led to increased sales by 10,500 vinyl records between 2018-2020
 - Implementation of charitable arm to support marginalized members of the artistic community impacted by COVID-19
- Recording Arts Educator** Landr Audio Inc. November 2019 – July 2020
Montreal, QC
- Developed a series of instructional video modules vulgarizing the principles of analogue synthesis. Aimed at making music production more accessible (76,000+ views on YouTube)
- Recording Studio Lecturer and Mentor** Red Bull Music Academy September 2016 – March 2020
Montreal, QC
- Team leader in the design and production of mobile recording studios dispersed across Canada
 - Individual and group teaching: fundamental skills of music production. Offered to musicians of varying experience
 - Production and music distribution workshop mentor for program alumni

VOLUNTEERING

- Intensive Care Unit Bridge Program** Volunteer Hospital Manager - Jewish General Hospital May 2019 – Present
Montreal, Quebec, Canada
- Program supporting patients and families in the ICU as well as providing opportunities for volunteers to shadow health care professionals
 - Selected for an executive role responsible for the effective management and optimization of the program for volunteers and hospital staff
 - Profile featured for CBC Radio and in an article titled "How students are making hospital intensive care units less intense for patients and their families" (David Gutnick, 2019)
 - Participation as a panelist for the McGill Student Association for Collaborative Mental Healthcare on the topic of my experience as a volunteer as well as beneficiary of the program
- Goodman Cancer Research Centre** Volunteer & Volunteer Committee Member May 2019 – Present
Montreal, QC
- Tasks included promoting visibility of the Goodman Cancer Research Centre public lecture series
 - Active leadership within the volunteer committee on the development of community outreach initiatives
- Community Event Coordinator** Never Apart June 2015 – June 2018
Montreal, QC
- NPO determined to bring about social change through art, culture and music with an emphasis on LGBTQ+ community health via biopsychosocial determinants
 - Coordination of special guests and panelists for community programming

Primary Researcher Thesis Project Johnson Lab - Lady Davis Institute September 2020 – Present
Montreal, QC

- Investigating immune pathway activation in Hodgkin's lymphoma patients treated with immunotherapy using single-cell RNA sequencing analysis
- Developed custom functions to combine single-cell and T cell receptor sequencing data in order to track T cell clonotypes across data set time points to determine T cell functional profiles of specific T cell clones
- Abstract ("Identifying Circulating Clonal T Cells in a Relapsed Hodgkin Lymphoma Patient Treated with Immune Check Point Inhibitor Pembrolizumab using Single-cell RNA Sequencing.") accepted by the Goodman Cancer Research Centre Research Symposium for student presentation, poster presentation and published in the McGill Journal of Medicine (May 2021)
- Abstract ("Distinguishing Anti-Tumour and Auto-Immune Responses Triggered by Pembrolizumab Using scRNA Sequencing in a Patient with Relapsed Hodgkin Lymphoma") accepted by the MI4 Scientific Symposium for student presentation, poster presentation and published in the McGill Journal of Medicine (December 2020)

Research Associate Johnson Lab - Lady Davis Institute August 2019 – Present
Montreal, QC

- Bioinformatics lead responsible for developing machine learning models to identify potential biomarkers from complete blood count data to predict early onset relapse in diffuse large B-cell lymphoma patients
- Preparation of circulating free DNA (cfDNA) from Hodgkin Lymphoma patients in order to investigate relationships between detected cfDNA with disease status
- Preparation of annotated tissue microarray consisting of 245 Hodgkin Lymphoma patients. Inspection of diagnostic histology slides in order to document significant areas of interest within the paraffin embedded tumour tissue in collaboration with a hematopathologist
- Conception and elaboration of a machine learning model to investigate the risk of diabetes and/or cardiovascular disease in remission patients based on biomarkers, biochemistry, and fitness tracker data

Research Associate Milieux Speculative Life Bio Lab – Concordia University September 2018 – May 2020
Montreal, QC

- Co-lead researcher on the interaction between electro-conductivity with fungi and their mycelial network. Basis for "Mycocene" prototype
- Tutoring of lab members on coding, electronic PCB design, and microcontroller software development

TECHNICAL SKILLS

- Fluent in programming languages: Python, R, Bash, Java, C, C++, Lisp, OpenGL, Julia, Latex
- Expert knowledge in Adobe Creative Suite, Microsoft Office, Arduino, Ableton Live 10, electronic circuit board design, maintenance, and production

EXTRA CURRICULAR ACTIVITIES

Workshop Leader and Tutor McGill University, Concordia University September 2018 – Present
Montreal, QC

- Designed and led introductory Python coding and single-cell RNA sequencing analysis workshops for McGill graduate students in Experimental Medicine and trainees at the Lady Davis Institute. The single-cell RNA sequencing analysis workshop was the most attended workshop of the year
- Developed a workshop to teach C++ programming language to Fine Art students. Tutor advanced Computer Science courses weekly and host online Q&A programming sessions during the academic year

Single-cell RNA Sequencing Working Group Member March 2021 – Present
Montreal, QC

- Monthly meeting of McGill graduate students and researchers to discuss and present current work
- Presented comprehensive overview of current research on single-cell T cell profiling (May 2021)

MonBug Member May 2019 – Present
Montreal, QC

- Active member contributing to knowledge sharing of bioinformatics and artificial intelligence within healthcare application
- Recipient of 2nd place prize at "hackerfest" competition for the presentation of a machine-learning model using multi-omics data to predict preterm birth risk (2019)

Vintage synthesizer restoration: Self Directed October 2005 – Present
Montreal, QC

- Self-taught electronic restoration and repair of vintage synthesizers and music equipment. Notable restoration: Arp 2600 from 1971. Two technical overview videos were created and shared on YouTube with over 75,000 views

Musician M Salaciak March 2002 – Present
Montreal, QC

- Semi-professional recording musician for over 15 years. Local and international concerts. Credited for playing keyboard on Socan award winning artists latest record