Daniella F. Lato

PhD, BSc

Mobile	(416) 806-3264	*LinkedIn*	daniella-lato
E-Mail	DaniellaLato@GMail.com	*Website*	www.DaniellaLato.com
GitHub	www.github.com/dlato		

Organized, inquisitive, and enthusiastic professional computational biologist offering 7+ years of success in scientific data and statistical analysis, bioinformatics, and research and development. Providing effective written and oral communication of scientific research specializing in bioinformatic techniques and genomics through project management, teaching, mentorship and grant writing.

CODING AND HIGH PERFORMANCE COMPUTING

R	**Unix/Linux**	**Moab/Torque**
R-shiny	**Python**	**shell scripting**
Bio-Conductor	**BioPython**	**Perl**
LaTeX	**Git/GitHub**	**HTML**

PROFESSIONAL EXPERIENCE

THE HOSPITAL FOR SICK CHILDREN (SICKKIDS), TORONTO, ON

Lead Computational Biologist — Mar 2021 - present

Project Manager — Mar 2021 - present

Post-doctoral Reserach Fellow — Mar 2021 - present

- Lead the computational division of the Maass Laboratory, consulting on 10 research projects, resulting in a 200% increase in bioinformatic trainees.
- Advanced use of data science, computational biology, and bioinformatics to analysis and processing of over 200T of large-scale complex scientific and genomic data through hypothesis driven methods.
- Developed 15 detailed bioinformatic pipelines to serve 10 members of the wet-laboratory, improving computational data analysis of gene set and pathways accessibility and reproducibility and enhancing the supervision of 2 research students.
- Responsible for the timely delegation and organization of 6 computational biology sub-projects and tasks with overlapping deadlines.
- Managed computational file structures and storage of over 200T of high-throughput genomic data (RNA-seq, Hi-C, WGS, ATACseq ... etc.) for the laboratory, resulting in easy access to required datasets.
- Designed efficient high-throughput workflows using parallel computing to reduce processing times of 77 Hi-C sequencing data sets.
- Articulated a compelling research proposal acquiring $100,000 in federal and provincial funding by initiating collaboration with the Wilson Labratory (SicKids) and investigating grant opportunities specific to the field of research.
- Strong collaboration with the bioinformatics division for the implementation of machine learning algorithms in high-throughput processing pipelines.
- Initiated and chaired weekly meetings with 4 separate project teams to ensure accurate deployment of delegated jobs for upcoming research deadlines.
- Actively supported the wet-laboratory with discussions of biological concepts to implement computational analysis exploring the epigenetic, proteomic, functional genomic, and structural biology of lncRNAs.
- Unaided comprehensive optimization analysis of over 40 computational workflows to investigate quality control and benchmarking statistics.

MCMASTER UNIVERSITY, HAMILTON, ON

Instructor May 2014 - Apr 2021

Campus Tour Guide Apr 2017 - Apr 2021

Researcher Sep 2014 - Mar 2021

- Independently led 3 major projects addressing basic scientific questions using statistical genomics methods to investigate 46 bacterial genomic datasets through the development of over 12 novel computational pipelines, resulting in 3 first author publications in high ranking scientific journals (Lato *et al.* 2022; Lato *et al.* 2021; Lato *et al.* 2020).
- Initiated the advertising of an undergraduate trainee position to assist with the processing of 5 large-scale proteomic datasets, effectively delegating project tasks to complete the analysis 6 months ahead of schedule.
- Instructed and supported undergraduate and graduate level courses on the topics of bioinformatics, mathematics, genetics, and molecular evolution to classes of 30-200 students, receiving surveys with positive feedback on education assistance.
- Crafted persuasive proposals that secured over $15,000 in international, provincial, and institutional research funds.
- Concisely communicated scientific research orally to field specific and public audiences of over 230 people at 7 international and provincial conferences, culminating in overwhelming positive feedback and best talk conference award.
- Provided guidance on the application of machine learning algorithms and techniques to accurately predict long non-coding RNAs, resulting in a successful open source prediction tool (Simopoulos *et al.* 2019).
- Performed rigorous assessment of next generation sequencing quality control of over 200 publicly available datasets (ENCODE, 4DNucleome, GEO, GTEx...etc.), including power analysis, to ensure highest quality data was used in subsequent analysis.
- Weekly collaboration meetings with 12 students, professors, and other academics across 4 departments to solve complex research problems related to molecular genetics, infectious disease, and evolution in a timely and reliable manner.

SELECT VOLUNTEER EXPERIENCE

MCMASTER UNIVERSITY, HAMILTON, ON
SYNCHRONIZED SWIMMING VARSITY TEAM

Novice Program Coach Sep 2019 - Apr 2020

Vice President Sep 2014 - Sep 2015, Sep 2018 - Sep 2019

Competition Manager Sep 2016 - Apr 2017

- Assist swimmers in establishing individual goals, prepare them for competition and foster a positive environment by developing and facilitating practice plans, workouts and comprehensive competition packages for a range of swimming abilities, including those who are new to the sport. The team is ranked 2nd in Eastern Canada and 6th Nationally.
- Coordinated 84 competitive athletes and 8 coaches resulting in a successful and healthy 7 seasons with steady registration and over 20 medal and podium finishes.
- Handled an annual budget of $20,000, coordinating a total of 21 varsity teams with swimmers ranging in athletic ability.
- Organized, planned, and executed the Canadian University Synchronized Swimming League National Competition at McMaster University, with a total of 22 Universities and over 450 athletes and coaches from all over Canada in attendance.

EDUCATION

MCMASTER UNIVERSITY, HAMILTON, ON

Doctor of Philosophy in Computational Biology and Genomics Sep 2015 - Mar 2021

Bachelor of Science in Mathematics and Biology (Honours) Sep 2011 - Apr 2015