



JATA MACCABE

Nationality: Canadian

Marital Status: Single

Date of Birth: November 25th, 1999

Languages: English, French

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PERSONAL SUMMARY

As a passionate student of Data and Computer Science, I am committed to advancing research on the intersection of AI and law. With a unique combination of creativity and analytical thinking, I aim to solve complex data-related challenges and find innovative solutions to improve access to justice.

EDUCATION

Master of Data Science: Computational Linguistics

Expected in 06/2023

University of British Columbia - Vancouver, BC

- 4.2 (A+) GPA

Course Highlights

- **Advanced Computational Semantics - COLX 563**

Application of machine learning to various semantic tasks. Information extraction, semantic role labelling, semantic parsing, discourse parsing, question answering, summarization, and natural language inference.

- **Supervised Learning II – COLX 561**

Optimization, gradient descent and stochastic gradient descent. Roundoff error and finite differences. Neural networks and deep learning.

- **Unsupervised Learning – DSCI 563**

Deriving groups and other structure from unlabeled, high dimensional data. Dimension reduction for visualization and data analysis. Clustering, association rules, model fitting via the EM algorithm.

First Class Honours Bachelor of Computer Science

Completed in 04/2021

University of New Brunswick - Fredericton, NB

- Specialization in Information Systems, Minor in Business Administration
- 3.8 (A) CGPA, 4.2 (A+) GGPA
- Dean's List 2017-2021

Course Highlights

- **Employment Law – ADM 4826**

Common and contract law of employment from commencement to termination; and to the statutory regulation of working conditions and employee protection mechanisms under various Acts.

- **Big Data Systems – CS 4545**

Relational and NoSQL data models. Query processing, including index-based access and join processing. Principles of parallel databases, batch processing frameworks, and iterative processing frameworks. Also covers spatial and spatio-temporal data processing.

ACADEMIC AWARDS	Merit Scholarship , MDS-CL Admissions Committee and UBC Department of Linguistics	2022-2023
	Computer Science Prize for Best Senior Honours Thesis , UNB Faculty of Computer Science	2021
	Beaverbrook Scholar's Award , Beaverbrook Scholar's Foundation	2017-2021
	Eldon and Maxine Clair Scholarship in Computer Science	2017-2018
	Loran Scholar's Provincial Award , Loran Scholar's Foundation	2017-2018
RESEARCH PROJECTS	NLP-Based Analysis of Ontario Housing Legislation and Judicial Relevance Factors in Decisions on Eviction , MDS-CL Applied Research Capstone Project	2023
	<i>Supervisor: Dr. Garrett Nicolai, Ph. D.</i>	
	<ul style="list-style-type: none"> Conducted analysis of 44,228 cases (metadata, CanLII data) of Ontario Housing legislation/decisions to determine commonalities in what circumstances judges think justify delaying or ordering an eviction. Prepared text for analysis with NLP principles and developed and validated a model. Created an API/dashboard enabling users to obtain quasi-real time results by running any Residential Tenancy Board (RTB) decisions through the algorithm to determine the factors a judge finds relevant to delaying or ordering an eviction. Collaborated with Dr. Lachlan Deyong, Allard Law, Legal Hackers Ontario and Future of Law Lab (UofT). 	
	Artificial Intelligence Based Approach to Legal Analytics in New Brunswick , Undergraduate Honours Thesis, UNB	2021
	<i>Supervisor: Dr. Michael Fleming, Ph. D.</i>	
	<ul style="list-style-type: none"> Scraped Canadian legal data from CanLII, with a focus on New Brunswick statute and common criminal law Used NLP techniques, including tagging, tokenization, and NLTK packages for parsing and vectorization, to process and clean the highly unstructured text Developed a model that could identify similar cases based on facts and description of the crimes The model could shorten the "Discovery" stage of legal proceedings 	
	SIGMORPHON 2023 Shared Task on Interlinear Glossing	2023
	<i>Supervisors: Dr. Garrett Nicolai, Ph. D., Dr. Miika Silfverberg, Ph. D.</i>	
	<ul style="list-style-type: none"> Investigated methods to automate the process of creating interlinear glossed text, a major annotated datatype in linguistic fieldwork, and often the only form of annotated data available for NLP work in low-resource languages. Built a system that generates morpheme-level grammatical descriptions of input sentences following the Leipzig glossing conventions. 	

Unconjugated Verbs in English Usage by Quebec-French Speakers: A Corpus-Based Analysis

2023

In Collaboration with: Dr. Marie-Eve Bouchard, Ph. D.

- Created a corpus of social media data to investigate unconjugated verb usage by Quebec-French speakers in casual speech.
- Utilized natural language processing and machine learning to identify linguistic features such as verb tense and verb placement.
- Conducted statistical analysis to identify patterns in unconjugated verb usage and analyzed socio-linguistic factors (age, regionality, education) that influenced language use.
- Results illuminate unique linguistic characteristics of French-Quebec speakers using English and contribute to understanding sociolinguistic variation in bilingual communities.

WORK HISTORY

Full Stack Software Developer

2022

CGI Canada – Halifax, NS, CA

- Full stack developer for the Medavie Bluecross Medicare Portal, assisting in the design and development of admin, healthcare provider, and public-facing portals for Nova Scotia residents
- Experience working on all levels of the project, including database development, API creation, and front-end development
- Mentored, trained, and supported junior and co-op team members, building strong relationships and guiding them to develop their skills and reach their professional goals

Database Developer

2019

Lewis Mouldings Ltd. – Weymouth, NS, CA

- Designed and implemented a comprehensive database system and web application to serve as a central repository for financial and operational information

Junior Software Developer, Data Analytics Intern

2018-2019

Community Forests International – Sackville, NB, CA

- Contributed to the design, development, and coding of a web-based dashboard and a data collection and analysis system
- Impact of the project included making hundreds of environmentally significant statistics accessible to a wide audience, such as trees planted and families' income increasing as a result of our project

Teaching Assistant

2018

University of New Brunswick – Fredericton, NB, Canada

- Led lab sessions for introductory Computer Science courses in MatLab and Python
- Assisted students with lab exercises and troubleshooting
- Graded lab examinations and provided feedback to students

TECHNOLOGIES

- Python
- SQL/NoSQL
- R
- Scala
- Git
- Java & C
- HTML & CSS
- VueJS

CERTIFICATIONS

Certified SAFe Practioner, Scaled Agile Framework (SAFe), SAFe for Teams

- Successfully completed training and exam to be a team member responsible for using Scrum, Kanban, and Extreme Programming (XP) methodologies

VOLUNTEER EXPERIENCE

Regional Volunteer

2017-2023

Canadian Improv Games, Moncton, NB & Vancouver, BC

- Coordinated and judged the New Brunswick & PEI Regional Improv tournament, responsible for raising funds and organizing workshops
- Volunteered as a referee for the Lower Mainland Improv tournament

Charity Representative, Diversity & Inclusion Representative

2019-2021

UNB Computer Science Association, Fredericton, NB

- Elected member of UNB's Computer Science Association, responsible for planning and running events for Computer Science students
- Advocate for under-represented groups in the faculty and organized charity events for the community

Peer Mentor

2018-2020

UNB Computer Science Association, Fredericton, NB

- Peer Mentor to first-year Computer Science students, responsible for planning and running orientation events and conducting faculty-sponsored tutoring sessions.