

WORK EXPERIENCE

Software Engineer · Thomson Reuters

June 2021 – Aug. 2021

- Built a HTML content extraction system for use in a fake news detection pipeline by cross-referencing results from multiple Python libraries
- Extended the backend of an automated curated newsletter, informing subscribers of relevant industry trends while logging user engagement using AWS, Flask, and SparkPost
- Evaluated and documented machine learning methods for parsing and extracting HTML content
- Developed Python scripts to manipulate metadata and ensure string validity, supporting a facial recognition and image captioning pipeline

Data Science · Statistics Canada

Sept. 2019 – Dec. 2019

- Developed Python tools for a standardization of English and French metadata variables using Natural Language Toolkit to reform variables from a many-to-many relationship to a one-to-one relationship
- Managed a metadata database with 50,000+ entries and added components to automate procedures

Data Analyst · Statistics Canada

Feb. 2019 – April 2019

- Predicted manufacturing times of operations for over 400 parts using regression, resulting in an optimized production schedule and projections of labour costs for all operations

PROJECTS

OnlyOne

Present

React Native + AWS real-time word game

- Facilitates real-time cross-device connections using AWS API Gateway WebSockets
- Adopts a serverless, scalable architecture leveraging AWS Lambda
- Optimizes costs through throttling, debouncing, and automatic clean-up timeouts for AWS DynamoDB

Memory Games ↗

Sept. 2023

React Native memory game collection

- Applies graph theory concepts to dynamically generate random paths in a maze

ytSheetMusic ↗

March 2023

AWS EC2+S3, React. and Flask Web App to convert sheet music from YouTube URL to PDF

- Identifies and isolates regions of interest using OpenCV Contour Detection, merging results to PDF
- Prevents sheet music duplicates by calculating structural similarity index between images
- Reduced result processing time from ~1 minute to instantaneous output by caching images in AWS S3

EDUCATION

University of Waterloo

Graduated 2022

BMath, Honours Computational Mathematics with Distinction (3.7/4.0 GPA)

- Minor in Computing, Minor in Combinatorics and Optimization
- **Relevant Courses:** Object -Oriented Software Development; Data-Intensive Distributed Analytics; Neural Networks; Algorithm Design and Data Abstraction; Logic and Computation; Data Warehousing and Mining

SKILLS & INTERESTS

- **Languages:** Python; JavaScript; C; C++; R
- **Technologies:** SQL; React; React Native; AWS; GraphQL; Flask; NumPy; pandas
- **Interests:** badminton; piano (classical and jazz); reading; meditation; self-improvement