Ryan**Oliveira**

Developer/Analytics · Computer Science Major & Statistics Major & Math Minor · University of Toronto

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⑂ Skills

Programming Languages	Python (Numpy, Pandas, Matplotlib) · R · SQL · Java · Rust · C · Javascript · LaTeX
Web Technologies	HTML5 · CSS3 · REST · GraphQL · ExpressJS · NodeJS · HTTP/TCP
Databases	MySQL · PostgreSQL · SQLite3 · MongoDB · Neo4j
Tools/Management	Git · Jira · R Studio · Tableau · GDB · gprof · Agile/Scrum · MS Suite

Work Experience

Data Science Engineer   Toronto, CA
CIBC Wood Gundy   Mar. 2022 − May 2024

- **Developing and Maintaining Our Codebase Ecosystem**
  - Designed an ecosystem of specialized Python modules, designed to be imported into larger projects to simplify code
  - These modules include functions varying from pulling data via an API to managing data pipelines between applications
- **Designing and Developing Internal Tools**
  - Developing tools and automation scripts that clean/shape data, perform data analysis, generate visualizations, and interact with Office365 applications **(Python, VBA)**
  - These applications have increased reporting efficiency by over **2x** and has greatly reduced the likelihood of user error
- **Data Cleaning and Analysis**
  - Worked alongside the CIBC Analytics Team designing and publishing a **Tableau** Dashboard which provides statistics across the entire client base. Provides at-a-glance statistics while having the functionality to drill down into adaptable, granular views through the usage of filters
  - Utilized **Power Query** to generate highly filterable and customizable tables created from data spread across several sources

Projects

Proxy Server
Induvidual Hobby − Created to see the performance benefits of caching and test the practicality of html injection

- Created a localhost proxy server designed to fetch and cache web pages, acting as a VPN when deployed on a remote machine **(Python)**
- Designed a system to modify and add to the code from retrieved html files, displaying how recent the fetched page is

Sudoku Solver
Induvidual Hobby − Designed as a quick method to check if a sudoku puzzle is valid

- Designed a recursive backtracking algorithm to find a solution to a sudoku board. **(Python)**
- Enabled the ability to exhaustively check if a sudoku board has more than 1 unique solution
- Rewrote the program to benchmark the efficiency of the algorithm when implemented in a faster language **(C)**
- Found that the C implementation of the algorithm runs **97%** faster on average compared to the Python implementation

Terminal Tic-Tac-Toe and Chess
Individual Hobby − Created to have the ability to play tic-tac-toe against human opponents during SSH

- Developed Tic-Tac-Toe and Chess games completely playable within the terminal **(Python)**
- Created client and server applications to allow playing others online through TCP sockets **(Python)**

Yell Detector
Individual Hobby − Used to prevent making too much noise at night

- Designed a command line tool that normalizes microphone input **(Python, Numpy)**
- Triggers a sound when the normalized input value passes a customizable volume threshold
- Logs each yell trigger and session statistics in .csv files for later data analytics

Education

University of Toronto HBSc
Honours Bachelor of Science in Computer Science, Statistics, and Math   Sep. 2016 − Apr. 2021