Lior Bragilevsky, MASc

Full Stack Developer & DevOps Engineer

Former research assistant at SFU's Multimedia Laboratory (2017-2020). Worked on a variety of machine learning projects and was funded by the Alexander Graham Bell Canada Graduate Scholarship − Master's. Enjoys learning new things and constantly challenging himself. Actively looking for software development opportunities to further advance his career.

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Portfolio
bit.ly/3qTDKs7

LinkedIn
bit.ly/33OfWOu

GitHub
bit.ly/3ixUH7G

WORK EXPERIENCE

Graduate Deep Learning Research Assistant

Simon Fraser University, Burnaby, BC   **Sep 2018 – Apr 2020**

- ❖ Developed tensor completion simulator to analyze existing state-of-the-art algorithms and prevent transmission errors;
- ❖ Published a journal manuscript in IEEE Access (IEEE Xplore) which outlined my proposed tensor completion algorithm and compared it against other algorithms. Goal was to provide a meaningful solution to advancing Machine Learning onto edge (mobile) devices (171 views & 12 downloads worldwide);
- ❖ Presented a demonstration conference paper at MMSP 2018 to illustrate the goal of this research work and present findings along with future work (696 views & 168 downloads worldwide);
- ❖ Published a thesis paper based on the journal manuscript – successfully defended (only minor revisions required);
- ❖ Submitted a poster to a conference to a conference (IEEE CTW 2020) highlighting the results of my proposed tensor completion algorithm.

Head Teaching Assistant for Upper Division & Cross-listed Graduate Courses

Simon Fraser University, Burnaby, BC   **Sep 2018 – Apr 2020**

- ❖ Courses:
  Deep Learning Systems (ENSC 413/813), Digital Communications (ENSC 428), Linear Systems (ENSC 380), Engineering Electromagnetics II: Design (ENSC 416), Engineering Electromagnetics I (ENSC 316).
- ❖ Duties:
  Marking (assignments, projects, and exams), holding office hours, assisting students in need through online discussions, and invigilating in exams.

NSERC Undergraduate Student Research Assistant (USRA) Intern – Co-op Student

Simon Fraser University, Burnaby, BC   **May – Dec 2017**

- ❖ Designed a Machine Learning image classification algorithm to aid in the prevention of deforestation around the world;
- ❖ Analyzed satellite images of the Amazon rainforest basin to extract features used to train a deep Convolutional Neural Network model;
- ❖ Published a conference paper (PACRIM 2017) to explain the above image classification algorithm and its purpose;
- ❖ Published a thesis paper outlining the results/findings related to the research work (443 views & 253 downloads worldwide) – successfully defended (only minor revisions required).

Satellite Communication – Co-op Student

SilverTip Telematics Inc., Burnaby, BC   **Jan – Apr 2016**

- ❖ Devised testing automation scripts using VEE Pro 9.32 for more efficient and accurate measurement collection of various test cases/scenarios;
- ❖ Assembled the final product of a given project from start to finish using various machinery equipment to produce a visually appealing product for the client;
- ❖ Analyzed the final product by performing various quality control tests to ensure proper operation;
- ❖ Fixed any bugs found in the performance testing and repeated the tests to make sure the final product was functioning exactly as the client requested.

EDUCATION

Master of Applied Science − M.A.Sc (Research based)

Simon Fraser University, Burnaby, BC   **Sep 2018 – Apr 2020**

- ❖ Engineering Science − Deep Learning (Accelerated Program, First Class with Distinctrion)
- ❖ CGPA: 4.17/4.33

Bachelor of Applied Science Honours − B.A.Sc Hons.

Simon Fraser University, Burnaby, BC   **Sep 2014 – Aug 2018**

- ❖ Engineering Science − Electronics Engineering (Honours with Distinction)
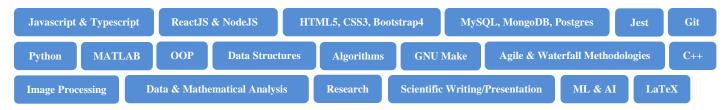- ❖ CGPA: 3.96/4.33

High-school Diploma − Gold Cord Honours

Burnaby Mountain Secondary School, Burnaby, BC   **Sep 2009 – Aug 2014**

- ❖ STEM Courses − En route to Engineering Field
- ❖ CGPA: 4.00/4.00, University Admission Average: 93.5% (Top 3 STEM Courses + English 12)

TECHNICAL SKILLS

Javascript & Typescript	ReactJS & NodeJS	HTML5, CSS3, Bootstrap4	MySQL, MongoDB, Postgres	Jest	Git

| Python | MATLAB | OOP | Data Structures | Algorithms | GNU Make | Agile & Waterfall Methodologies | C++ |

| Image Processing | Data & Mathematical Analysis | Research | Scientific Writing/Presentation | ML & AI | LaTeX |

PERSONAL PROJECTS

TabMerger – Cross Browser Tab Management Extension   Nov 2020 – Present
- ❖ Created using ReactJS and tested using Jest. Migrated to TypeScript to take advantage of type checking;
- ❖ Uses Browser API to manipulate tabs in the current window based on user input;
- ❖ Offers many essential features and contains backup options depending on the user's **subscription tier**;
- ❖ Has a dedicated official homepage where users can view information about TabMerger, contact me, or subscribe to a plan;
- ❖ Over **1000+ users**, **120+ upvotes** on Product Hunt, **100+ stars** on GitHub, **30+** five-star reviews, **5+ paying** customers!

ChatIn – Chat System + Client-Admin Communication   Aug – Nov 2020
- ❖ Created a chat system that allows users communicate with an admin that has special privileges;
- ❖ The admin can see all users that are logged in, names are displayed for each conversation, and messages are timestamped;
- ❖ Utilized a MongoDB database to persist messages in each chat field across reload events.

LogInPlay – Login & User Authentication System + Multi-Client Communication   Jul – Aug 2020
- ❖ Built a login system that allows users to register and login (after verifying their email) – persistent due to MySQL database;
- ❖ Passwords are encrypted and information is stored in JSON web tokens & cookies to maintain activity over multiple tabs;
- ❖ Embedded Javascript templates are used to simplify error handling and increase markup code reuse;
- ❖ Socket communication is implemented to allow multiple machines to communicate with one another in a game of tic-tac-toe.

SimplifyCOVID – Global Statistics Made Simple   Jun – Jul 2020
- ❖ Created an interface where users can access real-time statistics regarding the COVID19 pandemic using intuitive actions such as hovering over a country on a map;
- ❖ This website uses API calls to reputable sources to gather these statistics as soon as they become available;
- ❖ Features user controls/switches, global statistics, an interactive world map, graphs, and tables.

chessCAMO – Back-end & Front-end Chess Engine   Apr – Jun 2020
- ❖ Developed both the back-end and front-end (GUI) of a chess engine/game;
- ❖ Added extra features to a regular chess game to introduce a new, interesting, and unique chess variant;
- ❖ Open Sourced on GitHub and created documentation explaining the reasoning behind each design step to help others learn from my experience.

De-sketch – AI Model for Converting Mathematical Plots to Corresponding Equations   May 2018 – Mar 2019
- ❖ Designed a deep learning model that can capture images of mathematical drawings to predict their equations;
- ❖ Model provided accurate estimates of polynomial curves for both synthetically-generated and hand-drawn curves;
- ❖ Presented the methodology and results at a conference as a demo poster (696 views & 168 downloads worldwide).

TGen – AI Model for Text Generation using Recurrent Neural Networks   Sep – Dec 2017
- ❖ Implemented recurrent neural networks to generate text based on an input string's contextual information and patterns;
- ❖ Presented final performance of the model, with a live demo, in a graduate level course (Deep Learning Systems in Engineering) for random text input by fellow students.

HONOURS & AWARDS

1. British Columbia Graduate Scholarship (BCGS) × 1 → $15,000 CAD   **Sep 2020 – 2021**
2. Graduate Fellowship Scholarship × 2 → $3,250 to $6,500 CAD   **May – Dec 2019**
3. Hargreaves Scholarship in Sciences and Applied Sciences × 1 → $1,700 CAD   **Sep – Dec 2019**
4. Borden Ladner Gervais Graduate Scholarship × 1 → $1,000 CAD   **Jan – May 2019**
5. Helmut and Hugo Eppich Family Graduate Scholarship × 1 → $1,000 CAD   **Jan – May 2019**
6. Alexander Graham Bell Canada Graduate Scholarship-Master's × 1 → $17,500 CAD   **Sep 2018 – 2019**
7. NSERC Undergraduate Student Research Award (USRA) × 1 → $4,500 CAD   **May – Sep 2017**
8. Undergraduate Open Scholarship × 7 → $300 to $1,800 CAD   **Oct 2015 – Aug 2018**
9. SFU Alumni Scholarship × 3 → $500 to $1,000 CAD   **Sep 2014 – May 2018**
10. President's Honour Roll × 4   **May 2016 – Aug 2018**
11. Dean's Honour Roll × 8   **Sep 2015 – Aug 2018**

LANGUAGES

English	Russian

INTERESTS

Chess (Logic Games)	Coding/Web Development	Learning	Reading	Sports & Fitness