

PROFESSIONAL EXPERIENCE

- **Google LLC, Software Engineering Intern, Google Docs Team** 2018 Summer
 - Implemented MVC structured, accessibility-friendly user interface for layout formatting on Google Docs Android
 - Discovered and proposed solution for flaws in code base vulnerable to potentially significant decrease in typing performance
 - Released completed feature to Google Docs Android, reaching over 100 million users
 - Technologies: JavaScript, Java + Android, Google Closure, Bazel
- **University of Toronto, Research Assistant** 2017 Summer
 - Assisted CS Professor with educational game design research, written report on effective game design elements
 - Design and developed educational game Deadlock ([Link](#)), constructed survey, gathered data from 20+ testers
 - Implemented in-game graphical block scripting interface and compiler in Unity **C#**, using embedded JS engine
 - Received A+ evaluation from supervisor: Prof. Steve Engels. Featured on UofT News ([Link](#))

EDUCATION

- **University of Toronto, Honors B.Sc, Computer Science Specialist** Class of 2020
 - **GPA: 3.97**, Dean's List Scholar, President's Entrance Scholarship
 - Upper-level Courses:
 - Neural Networks and Machine Learning
 - Software Engineering
 - Introduction to Visual Computing
 - Algorithm Design Complexity
 - Natural Language Computing
 - Computer Graphics

SKILLS

- **Languages:** Python, C/C++, C#/Java, HTML, CSS, JavaScript, TypeScript, QML, Haxe, SQL, Verilog, Bash, Emacs Lisp.
- **Frameworks + Libraries:** Node.js, Express, Angular 2, Ionic, Bootstrap, Qt Quick, Vue.js, PyTorch, OpenFL, Google Closure.
- **Tools + Software:** Linux, Vim, Emacs, Git, Eclipse, Photoshop, Flash Professional, Unity3D, Microsoft Office.

PERSONAL PROJECTS

- **Time Management App** TypeScript, Angular 2
 - Implemented rigorous time-management hybrid app using HTML, CSS, TypeScript, Angular 2 and Ionic, with automatic scheduling and reward system.
 - Designed greedy algorithm to achieve real-time planning up to 365 days into the future
- **TensorBuilder**([Link](#)) QML, JavaScript
 - Implemented a GUI editor for TensorFlow™ in QML and JavaScript using Qt, with intuitive drag-and-connect interface
 - Compiles the graph directly to Python for execution
- **Neuro-evolution Demo**([Link](#)) C++
 - Implemented neural network with evolutionary algorithm in C++ using SFML framework during high school
 - Successfully trained simulated ants to seek food by learning
- **Procedural Game**([Link](#)) Unity, C#
 - Designed and developed procedural-generated 2D action / adventure game in Unity C# and Haxe
 - Implemented procedural generation as well as culling algorithm to support seamless map with 60000+ tiles
 - 1st place in UofT Game-Making Deathmatch 2017

COURSE PROJECTS

- **Reddit Political Persuasion Classifier** Python
 - Trained Python program to study political affiliation of comments on Reddit
 - Pre-processed and tokenized the data, manually extracted features, trained multiple classifiers using scikit-learn
- **ShareSchedule**([Link](#)) Node.js + Express, PostgreSQL
 - Developed vanilla JS website with Node.js + Express and PostgreSQL, with RESTful API
 - Interface with UofT API, intelligently plan time tables for UofT students, with Facebook login and schedule sharing
 - Written backtracking algorithm in JavaScript to automatically solve for conflict-free schedules
- **Machine Translator** Python
 - Written Python application to translate text across different languages, using smoothed n-gram model
 - Applied IBM-1 alignment model, evaluates with BLEU
- **Emoji Style-Transfer** Python, PyTorch
 - Implemented CycleGAN, a Deep Convolutional Generative Adversarial Network (DCGAN) in PyTorch
 - Generates iOS-style emoji from/to Windows-style emoji

AWARDS AND CONTRIBUTIONS

- 1st Place - Bloomberg Codecon UofT 2017
- 2nd Place - Microsoft Code Competition UofT 2017
 - Solved one of the hardest problem
- 2nd Best Accuracy - (National) USC Competition 2017
 - Developed geo-tagging tool for drone mission
- Silver Medalist - (National) Canadian Computing Olympiad([Link](#)) 2016
- Co-President of Game Design and Development Club 2017 - 2018
- 1st - UofT Game-Making Deathmatch 2017
 - Best Overall and Best Technical Achievement Award
 - Judges recommended commercial release
- 3rd Place - Big Data Challenge 2016
 - Analyzed and visualized open data using Python
 - Journal Published on STEM Fellowship([Link](#))
- Vision Subdivision Lead of University of Toronto Aerospace Team: Aerial Robotics division 2017 - 2018