

## 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