# JACOB KELLY

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## EDUCATION

**University of Toronto**                                                              Toronto, ON
Computer Science (Focus in AI) and Mathematics *GPA:4.0/4*                 Sep 2017 — May 2021
*Enriched Intro to Theory of Computation (enr.), Intro to Neural Networks (audit)*

## SKILLS

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|---|---|
| Machine Learning: | TensorFlow, NumPy, MATLAB |
| Software Development: | Python, Java, C++ |
| Version Control: | Git |
| Web Development: | HTML, CSS, JavaScript, jQuery |

## EXPERIENCE

**Computer Vision Engineer** *TensorFlow*                                         Toronto, ON
*Autonomous Rover Team, University of Toronto Robotics Association*            Sep 2017 — Present

- Implemented, trained, tested, and tuned hyperparameters of computer vision model for object detection for International 2018 Intelligent Ground Vehicle Competition.

- Led team of 3 members in implementation of TensorFlow port (darkflow) of YOLOv2 object detection model on NVIDIA Jetson TX2 using kanban software development methodology.

**Web Developer** *HTML, CSS, JavaScript, jQuery*                              Mississauga, ON
*Glenforest STEM*                                                              Feb 2016 — Jun 2017

- Designed and self-developed (full-stack) website for ∼ 500 unique visitors/month in promoting conference for ∼ 2000 delegates.

- Created extensive documentation of codebase for future web developers, reducing training time to 25 hours.

**Health Lab Intern** *Android SDK, Estimote API*                               Toronto, ON
*Cossette*                                                                     Jul 2016 — Aug 2016

- Developed (full-stack) native Android Application, Pocket Guide, a tool to guide both visitors and patients through SickKids Hospital using Estimote Beacons.

- Led team of 2 members in design and development of UI/UX, noise reducing and pathfinding algorithms.

## PROJECTS

**Cartpole** *Numpy, TensorFlow*                           github.com/jacobjinkelly/cartpole

- Implemented hill climbing and policy gradient reinforcement learning algorithms for solving OpenAI Gym Cartpole environment.

**Adversarial Examples in MNIST** *TensorFlow*          github.com/jacobjinkelly/adversarial-mnist

- Generated adversarial examples to fool state of the art MNIST classifier.

**Robby the Robot** *NumPy*                            github.com/jacobjinkelly/robby-the-robot

- Genetic algorithm for evolving strategies for a virtual cleaning robot.

## AWARDS

**Certificate of Distinction, Euclid Mathematics Contest, University of Waterloo**    Apr 2017
Finished in top 15% of 17,000 participants in national math competition.

**1st Place, ECOO Programming Contest**                                         Mar 2017
Achieved highest score amongst over 60 teams from across Peel Region, completing 5 algorithmic problems in 3 hours. Went on to place Top 10 in Central Ontario.

## INTERESTS

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|---|---|
| **Running** | Working towards my first 10K this summer |
| **Reading** | I read about 35 books a year |
| **Machine Learning** | Currently completing Andrew Ng's Deep Learning specialization |
| **Misc.** | 3Blue1Brown, The Nerdwriter, Ted Chiang's Short Stories, Westworld |