

Andrew Jemin Choi

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SUMMARY

An engineering student with an affinity to invent, explore and optimize. My strength is finding innovative solutions to open-ended problems by using my knowledge of algorithms and engineering design.

EDUCATION

University of Toronto

Toronto, ON

B.A.Sc. in Electrical Engineering

2014 - 2018 (expected)

Dean's List 2014-2016

WORK EXPERIENCE

Safran Electronics and Defense Canada

Peterborough, ON

Software Engineering Project with UT-IMDI

May 2016 – Aug 2016

- Received the NSERC Experience Award, valued at \$5625, to define a documentation process and improve avionic software traceability for Safran's Auxiliary Power Unit (APU) and Landing Gear and Control Steering Unit (LGCSU).
- Designed and Documented architecture diagrams for over 1000 functions across 6 APU and LGCSU libraries, written in C and Assembly, adhering to DO-178B guidelines.
- Developed a Python program to efficiently parse aviation requirements and cross-check data flow in the code. The program reduced errors in documentation by about 50%.

University of Toronto, Faculty of Applied Science and Engineering

Toronto, ON

APS 100 Teaching Assistant

Sep 2016 – Dec 2016

- Appointed as a course facilitator for an undergraduate course, Introduction to Engineering (APS100), and led weekly tutorial sessions of 30 students.
- Organized and delivered workshops to teach first year students about time management and professional development.

University of Toronto Engineering Outreach

Toronto, ON

Jr. DEEP Summer Instructor and Curriculum Developer

May 2015 – Aug 2015

- Designed a cryptography-themed Python course for elementary students.
- Delivered a Computer Engineering course to over 120 students at UofT's engineering summer program (Jr. DEEP). Received very positive feedback on the course from students, parents and team leaders.
- Administered STEM workshops at TDSB schools for over 300 students.

PERSONAL PROJECTS AND COURSEWORK

Mapping the City of Toronto (C++)

- In a team of three, developed software on using the OpenStreetMap Database and APIs. The software used interactive graphics and implemented efficient graph algorithms and data structures to find closest paths between points of interest (50% faster than expected metrics).
- Devised a solution to a variation of the Travelling Salesman Problem by using knowledge of algorithms (Dijkstra's algorithm, Simulated Annealing) and data structures (priority queues, trees, graphs, lists).
- Employed various methods of code testing and analysis such as profiling, code coverage, and unit testing.

AlphaPitch (Assembly)

- Created a Baseball pitching game by interacting with LEGO sensors and motors using Assembly. The game could throw balls at different speeds and at random intervals, and it could keep track of how many times the batter hit the ball.

Crunch: A reflex game (Verilog)

- Designed a video game with a partner using knowledge of Finite State Machines and graphic animation. The game used an algorithm that calculates user performance and increases in speed and difficulty as the user's reflexes improve. Received full marks (40/40) on project with very favorable reviews.

See more of my Projects on: github.com/andrewjeminchoi

LEADERSHIP AND VOLUNTEERING EXPERIENCE

University of Toronto, Skule™ Alumni Outreach

Toronto, ON

Student Outreach Coordinator

2015 - 2016

- Founded a new initiative called Skule™ Ambassadors in order to help represent UofT's engineering undergraduate community at Alumni meetings and echo the voices of over 5500 undergraduate students during faculty events.

University of Toronto, Department of ECE

Toronto, ON

Electrical and Computer Engineering (ECE) Ambassador

2015 - Present

- Represented UofT's ECE department at official recruitment sessions and informed prospective students about the ECE department and program.
- Acted as voice of the ECE undergraduate students and discussed improvements that can be made in the current ECE curriculum.

University of Toronto, Track One Mentorship

Toronto, ON

Dedicated (Head) Mentor

2015 - 2016

- Selected as a leading mentor to help high school students transition into University life and led four casual mentors to coordinate academic and networking events for undergraduate students.