**CHARLIE HUANG**

**Address:** 46 Madoc Pl, Woodbridge, ON, Canada

**Contact Info:** +1 (669) 262-9971 **Email:** [haoen.huang@mail.utoronto.ca](mailto:haoen.huang@mail.utoronto.ca)

**EDUCATION**

**University of Toronto** **Expected Graduation 2018**

* *B.A.Sc.* in Engineering Science – Electrical and Computer Engineering
* Honor Roll 2014-Present, President’s Entrance Scholarship (2013)

**TECHNICAL SKILLS**

**Languages:** Python, C/C++, Java, Perl, CShell, Tcl, Verilog, Objective C

**Technologies:** Linux/Unix, Perforce, Visual Studios, Arduino, Xcode, NIOs 2 Assembly

**PROFESSIONAL EXPERIENCE**

**Software Developer Intern May 2017 – Aug 2017**

**Google Waterloo, Canada**

* Designed and implemented a safe, easy to use, and serializable Money API
* Updated Display Ads Infrastructure’s auction codebase to make use of new API
* Refactored code to help facilitate new auction services

**Software Engineering Intern May 2016 – Apr 2017**

**Advanced Micro Devices Sunnyvale, USA**

* Provided support and enhancements to the TileBuilder Infrastructure, a distributed system used for automated design flow for VLSI physical design
* Enabled caching in critical paths of the flow to improve runtime
* Constructed new parameterized design flows for technology evaluation
* Wrote Python scripts to process data and store performance metrics into MySQL databases
* Wrote and updated Tcl scripts for calculating utilization, leakage power, timing analysis
* Wrote software regression test suites

**Research Intern May 2015 – Jul 2015**

**Lund University Lund, Sweden**

* Designed an ASIC for matrix multiplication from behavioural description to GDSII
* Utilized CAD circuit-design tools: ModelSim, Design Vision, and Cadence Encounter
* Wrote Python scripts to optimize design by performing parameter sweeps of utilization density and aspect ratios

**RELEVANT PROJECTS**

**Eye Contact Detection – Thesis Sep 2017 – Present**

* Worked with Dr. Khai Truong, Associate Professor at the University of Toronto
* Utilized image processing, and machine inference algorithms to measure eye gaze, and classify whether eye contact is established between individuals

**Autonomous Mobile Robot – Team Lead Jan 2015 – Apr 2015**

* Designed and built an autonomous robot that performs complex maneuvering, relocates objects strategically into a connect-four board
* Programmed Arduino microcontrollers as a FSM with infrared and ultrasonic sensors inputs
* Worked with team to integrate the mechanical and electrical subsystems

**Application Game Developer** at Royal Ontario Museum **May 2014 – Aug 2014**

* Developed iOS app featuring exploration of the interior of the museum