

Yuma Tsuboi

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Education

M.Eng. in Mechanical Engineering (Robotics), University of Toronto **Nov 2016**

- Social robotics/Human-robot interaction
- Grade average: **A-** (80-84%)

B.A.Sc. in Engineering Science (Electrical & Computer), University of Toronto **Jun 2015**

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|--------------------------------|---------------------|------------------------|
| - Artificial Intelligence | - Operating System | - Database |
| - Machine Learning/Data Mining | - Computer Security | - Statistical Analysis |
| - Algorithms/Data Structures | - Computer Networks | - Robot Design |

Projects

Automated Emotion Recognition from Voice Intonation **Sep 2015 - Oct 2016**

- Created an AI that detects a speaker's emotion from voice intonation in conversations
- Achieved 82% accuracy with Neural Networks in cross-validation
- Programmed voice feature extraction in Matlab/C++ and emotion classification in Python
- Installed on a humanoid robot to experiment with human interaction

Breathing Instructor Android App **Sep 2014 - Apr 2015**

- Developed a guided breathing exercise app to combat anxiety
- Inferred breathing pattern via sound level from microphone and noise reduction
- Designed a UI of inflating/deflating lung for visual feedback
- Programmed to provide exercise parameters recommendation based on past performances

Smoking Cessation Android App **May - Sep 2014**

- Collaborated with clinicians to assist cigarette smokers to quit smoking
- Designed a heatmap to show where relapse was experienced based on user input
- Programmed reminders to display pictures/videos to reiterate motivations for quitting
- Developed a calculator to display the amount of savings from deciding to quit

Work Experience

CAD Design Engineer Intern, AMD - Sunnyvale, California **May 2013 - May 2014**

- Design Methodology team responsible for the internal CAD tool, a variety of EDA tools integrated using scripts, used for chip design
- Performed regression testing on chip floor-planning, pin and repeater placement, power, budgeting and EDA tool versions
- Managed chip layout features such as wiring and repeater insertion for power consumption and timing control using Python, Perl, C shell and Verilog

Skills

Programming languages: Java, Python, C, C++, Javascript

Technical tools:	- Linux	- Matlab	- HTML/CSS
	- SQL	- R	- Jinja2
	- Git	- Android Studio	- Perforce
	- Weka	- Google App Engine	