Benjamin Yu

Computer Engineer

about

71 Spring Blossom Cres.
Markham ON
Canada

(647) 938-8026
benjamin.yu@utoronto.ca
http://ben-yu.com
benjamin-yu
lestealth
ben-yu

programming

Java
C, ObjC
Python
JS
(backbone,node,coffee)
Learning Scala & Clojure

interests

machine learning, data science, gamedev, healthcare, startups

education

B.A.Sc. in Engineering Science

University of Toronto 09/2008 - 04/2013

Major in Electrical and Computer Engineering
Thesis: Mobile Hearing Diagnostics

experience

XTouch.io

Senior Mobile Engineer (Part-time) 11/2013 - present

- Makes any surface tap-sensitive by placing a mobile device on top
- iOS application development to demo XTouch engine

PatientOrderSets

Junior Developer 09/2013 - present

- Developing features for customer PACS software in JEE/Struts
- Integrating disparate systems using standard protocols such as HL7 and DICOM

AMD

SOC Verification Intern 05/2011 - 08/2012

- Verification infrastructure and flow development of random testing methodologies for various chip IP's using Perl, C/C++ and SystemVerilog

Sunnybrook Health Sciences Center - Medical Imaging

Developer/Research Assistant 05/2010 - 08/2010

- Performed study comparing reperfusion vs. recanalization as an indicator of clinical outcome

projects

Space Bees

https://github.com/ben-yu/Space-Bees 07/2013 - present

- HTML5 multi-player arcade shooter using WebGL, Socket.io and node.js

Forward

01/2013-04/2013

- Developed a web-based end-to-end email and project management suite for the SME market, with a paradigm focus on transparency and efficiency.

Sones

https://github.com/ben-yu/Sones 09/2012 - 04/2013

- iOS hearing diagnostic game. Developed with Cocos2D-X, Box2D and Stanford STK

coursework

Speech Recognition

Natural Language Computing - CSC401 03/2013 - 04/2013

- Created a speaker identifier using Gaussian Mixture Models trained over the Mel-frequency cepstral coefficients from the speech waveforms and their phonetic and word transcriptions

Facial Expression Recognition

Machine Learning and Data Mining - CSC411 11/2012 - 12/2012

- Achieved a 77% accuracy on a final dataset of 1000 facial expressions with a SVM with an RBF kernel, grid search and bagging

Raytracer

Computer Graphics - CSC418 11/2012 - 12/2012

- Basic raytracer in C++ with anti-aliasing, glossy reflections, basic refraction, soft shadows, area light sources and texture mapping

Systems Programming

Computer Systems Programming - ECE454 09/2012 - 12/2012

- Implemented a dynamic memory allocator with a segregated free list and best-fit search.
- Parallelized a command-line version of Conway's Game of Life, achieving a 10x speedup compared to the regular serial version

Operating Systems

Systems Software - ECE353 01/2012 - 04/2012

- Developed features for OS/161, a simple operating system which includes a standalone kernel and simple user-land written in C
- Implemented process management, basic system calls, virtual memory, and a basic hierarchical file system

Processor Optimization

Computer Organization - ECE352 09/2011 - 12/2011

- Converting a basic multi-cycle processor on an FPGA in Verilog into a pipeline processor to improve performance
- Implemented caching, speculatively executing instructions after a branch, forwarding, and additional pipeline stages

Battery Sorting Robot

Engineering Design - AER201 01/2011 - 04/2011

- Designed a fully autonomous robot to sort batteries based on size and charge.
- Fabricated essential components including an H-Bridge motor driver, stepper motor driver, infrared sensors, and power supply