

Ismael 'Izzy' Gomez

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Education

Massachusetts Institute of Technology

Cambridge, MA

Candidate for Bachelor of Science in Computer Science and Engineering

Expected 2017

Select Coursework: Algorithms and Data Structures, Android Development, Artificial Intelligence*, Software Engineering (Java, Web*), Computational Structures*, Linear Algebra, Differential Equations

Experience

Computation Structures Group at CSAIL

Cambridge, MA

Undergraduate Researcher

Summer 2015

- Tested and debugged the compiler of a Fresh Breeze multiprocessor chip, which is an architecture simulated in Java optimized for high-performance, parallel computation
- Designed and refactored a benchmark program implementing the Hartree-Fock method, a quantum mechanics approximation algorithm, in a functional-programming variant of Java

Changing Places Group at the MIT Media Lab

Cambridge, MA

Undergraduate Researcher

Spring 2015

- Developed and programmed interface between an algorithmic analysis package in MATLAB to a prototype hardware system of modular, pressure-sensitive sheets run using an Arduino and ATmega8 boards
- Model k-means clustering algorithm to identify individual footsteps on the pressure-sensitive sheets; analyze footsteps and corresponding centroids to predict walking behavior

Pololu Corporation

Las Vegas, NV

Electrical and Software Engineer

Summer 2014

- Designed and tested printed circuit board for *A4990 Dual Motor Driver Shield for Arduino* using Altium PCB Designer, Git, and various hardware testing tools
- Developed corresponding *Arduino software library*, simplifying use of Shield with brushed DC motors; final product solved issue of providing inexpensive motor driver capabilities to the Arduino platform

Leadership

Theta Delta Chi Fraternity

Cambridge, MA

House Manager

Fall 2014 - Present

- Managed fraternity-wide efforts to maintain, repair, and renovate a five-story property; coordinated and budgeted renovations with local government inspectors and independent contractors

Network Administrator

Fall 2014 - Present

- Redesigned, updated, and maintained fraternity website using Wordpress; utilized Python scripts to update email lists; updated and reorganized local server content

Skills

Languages: Python, Java (Eclipse, Android Studio), Javascript (Node, jQuery, three.js/WebGL*), Common Lisp*, HTML/CSS (Liquid, EJS, Sass), Assembly*

Tools: MongoDB (Mongoose), Heroku, L^AT_EX, Git, Bash, Linux (Kali, Ubuntu), Jekyll, Windows 8/10

Interests: WebDev, Personal Analytics, Productivity Apps, Dance, Soccer

*in progress