**Pratik Gangwani**

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**Education**\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Georgia Institute of Technology,** Atlanta, GA 8/2012 - 5/2016 *(anticipated)*

* Candidate for Bachelor of Science in Computer Engineering
* Overall GPA: 2.93; Major GPA: 3.10

**Projects and Experience** (<https://github.com/Zaydax)> \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Software Engineering Intern**, ThyssenKrupp Elevators America, Atlanta, GA Summer 2015

* Worked with Raspberry Pi, Python, and various sensors (barometer, accelerometer, gyroscope, ultrasonic) to create a real-time data collection system for diagnostic and other test purposes.
* Main algorithm uses change in atmospheric pressure via the barometer to calculate the current floor and output all collected system data to a CSV file, within a 2 second cycle once the elevator comes to a stop.
* Helped design an Android app to communicate with the Raspberry Pi via Bluetooth to retrieve data files.

**Mangagaga,** personal side project Fall 2014 - Present

* Android application written in Java, then ported to Scala
* Open source manga reading app that utilizes LuaJ scripts and reg-exs to parse URLs and display content

**LC3b Processor: Computer Architecture,** Georgia Tech, ECE 3056 Fall2014

* Emulated LC3b ISA and multi-cycle microarchitecture via C
* Programmed (in C) a single core 5 stage pipelined processor and a multi level cache (including DRAM)

**PandaBot,** Georgia Tech, ECE 2031 Fall 2013

* Team project to control AmigoBot using IR Remote, had instantaneous response and 3 speed settings
* Programmed Altera FPGA, DE2 board, and IR Receiver via Altera Quartus, VHDL and Assembly
* Used 16 LSB’s from the 32-bit IR signal that provide commands are sent into the I/O bus via tri state buffer

**MBED Projects**, Georgia Tech, ECE 2036 Fall 2013

* Assembled a circuit with MBED micro-controller programmed via C++
* Thermostat: heating and cooling options, plus an auto setting to keep temperature between a specific range
* MP3 player: Ability to read files from SD card, along with complete volume and playback controls

**Leadership and Activities\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**IEEE Hardware Team,** Georgia Tech (4hrs./week) Fall 2014 - Spring 2015

* **Software Team Lead**: Head of 4 person team that designed software for Arduino/BeagleBone via C/Python to control motors & phototransistors for line following on a robot for IEEE Southeast Con 2015.

**ECE Ambassadors** (2hrs./week) Spring 2013 - Present

* **President**: Head of a five person team in charge of department tours, events, and advice panels for students
* **VP of Tours**: In charge of 15 tour guides for planning and execution of tours for prospective students

**CEO: One Day Blood Drive Project Inc. (GT Red Cross)** (2hrs./week) Fall 2012 - Present

* Head of a 10 person team that organizes an annual nationwide blood drive on 9/11
* 2013: 778 units in 2013 via 21 schools; 2014: ~1000 units via 26 schools; 2015: 527 units via 10 schools.

**Team Leader: ECE GT 1000** (2hrs./week)Spring 2014, Fall 2014, Fall 2015

* Assist professor in giving lectures and provide advice to ~25 students on how to succeed at Georgia Tech

**Skills\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**Programming:** (2+yrs.) : Assembly, C/C++, Java, Matlab, Python (~1yr): Bash, CSS, HTML, PHP, Scala, SQL

* Experience programming for: Arduino, Android, BeagleBone, MBED, Raspberry Pi

**Software:** LabView, Linux, Mac OSX, Microsoft Office, Quartus II, Vim, Windows

**Digital Design:** Breadboard Prototyping, FPGA, and State Machine Analysis

**Instrumentation:** Soldering, Oscilloscope, Multimeter, Logic Analyzer

**Languages:** English (Native), Hindi (Professional working proficiency), French (Elementary)

**Communication:** Presentations, Public Speaking, Technical Reports, and Team Projects