

PHILIP TRAN BA VO

1105 Cantara Court ◇ San Jose, CA 95127
(408) 386-6142 ◇ philiptranbavo@gmail.com

EDUCATION

University of California, Davis

September 2013 - in progress

M.S. in Electrical and Computer Engineering

Researched Vehicular Ad-hoc Networks (VANET) and Intelligent Transportation Systems (ITS)

University of California, Davis

September 2009 - September 2013

B.S. in Computer Engineering

GPA: 3.54

Dean's List: Fall 2009 - Winter 2011

COMPUTER SKILLS

Languages: C, C++, TCL, Python, Java, ARM, x86, Verilog.

Software: Quartus, Vivado, OMNeT++, Git, VMWare, LaTeX, MATLAB.

IDEs: Eclipse, Keil μ Vision, Arduino, Visual Studio.

Operating Systems: Unix, Linux (Ubuntu, Red Hat, Fedora, Kali), Windows.

Microcontrollers/Boards: Stellaris (LM3S8962, LM3S2110), Arduino Due, Altera (SoCKit, DE2, Arria II, Nios II), Xilinx (Artix, Zedboard, Microblaze).

ENGINEERING PROJECTS

VENTOS: Vehicular Network Open Simulator

UC Davis, Spring 2014 - Fall 2015

- Simulated multi-modal traffic (cars, pedestrians, bicyclists) in a VANET where each entity has wireless communication and is able to beacon information (position, velocity) to each other.
- Designed traffic controllers that are, for the first time, able to consider pedestrians and bicyclists as part of the signal timing plan by using the beacons to sense their presence, effectively reducing the delay of green transportation modes.

Robotic Systems

UC Davis, Spring 2014

- Designed a robotic system consisting of a fixed base station and a free-moving miniature car with a gripping arm, representing a garbage collection and sorting system.
- Using sonar and color sensors, it can pick up different colored objects and sort them accordingly.

NATCAR Design Project

UC Davis, Summer 2013

- Designed and constructed a miniature autonomous race car capable of navigating a track. The car uses a closed-loop DC motor control to control the speed, a servo to control the steering angle, and an optical sensor to sense the track.

Design and Optimization of Embedded Computing Systems

UC Davis, Spring 2013

- An iOS app was built to use an iPhone's accelerometer to perform dead reckoning.
- The app tracks the phone's acceleration to attempt to calculate the current position, which proves to be highly inaccurate, even with a Kalman filter.

Digital Systems I, II

UC Davis, Summer 2011 & Spring 2012

- Using sequential and combinational logic designs, several ICs were connected on a breadboard to produce the circuitry for a die game called 15.
- Used Quartus to run functional and timing simulations of digital circuits written in Verilog for an Altera DE2 board. Designs include: counters, RCA, multiplier, RAM, ALU.