
An embedded systems engineer with 7 years experience designing for electronics & robotic systems projects.

EDUCATION

NEW YORK UNIVERSITY | *Tandon School of Engineering*

Dual Degree B.S. in Electrical and Computer Engineering
Grad. May 2017

RELEVANT COURSEWORK:

Sensor-Based Robotics (*Grad.*)
Circuits I, II, & Electronics I

Artificial Intelligence (*Grad.*)
Data Structures and Algorithms

Real Time Embedded Systems (*Grad.*)
Feedback Control

PRIOR EDUCATION: City University of New York, (2014) | The New Actors Workshop, NY (2002) | Valencia College, FL (2000)

HARDWARE AND SOFTWARE COMPETENCIES

Technical: Sensor Integration, Timers and Hardware Interrupts, FPGA's, RTOS's (FreeRTOS), I2C, SPI, UART, TCP/IP, ADC/DAC Actuators and Motor Control (PWM, PID)

Languages: C/C++ (C Primary, 7yr), Python (3yr), ARM Assembly (2yr), LabVIEW (2yr), MATLAB (2yr), VHDL (1yr)

Software: Altium (2yr), Eagle (7yr), Xilinx ISE(1yr), Linux (4yr), GIT (4yr), GCC, GDB, GNU Make (3yr), NXP Kinetis (2yr), Keil (1yr)

Test Equipment: Soldering (7yr), Oscilloscopes (5yr), JTAG / SWD debugging (2yr), Multimeters, Logic Analyzers, Datasheets

PROFESSIONAL EXPERIENCE

Persistent Systems, LLC (Military / Commercial) New York, NY
Software Engineering Intern, Embedded

May 2016-Sept. 2016

- Performed board bring-up, chip configuration, HW/SW debugging, schematic review, and wrote documentation for an NXP ARM Cortex-M based HDMI to MyDP Video-in peripheral for the company flagship MPU5 Android military radio platform.
- Ported 40,000+ lines of 8-bit 8051 C code to a pin compatible 32-bit NXP / Freescale ARM microprocessor.
- Cross-compiled NXP x86 bootloader utilities for radio ARM-Linux kernel and created 'auto-upgrade FW on cable-detect' feature for MPU5.

American Jewish World Service (Non-Profit) New York, NY
Administrative Coordinator, Development Department

March 2007-July 2013

- 6 years as administrative project coordinator supporting 19+ fundraising department employees.
- 4 years as department steward and two years interim oversight/projecting/reporting of a \$2.1 million-dollar department budget.
- Created Python targeting software for fundraising team returning median household income data given a target zip code and radius.

OTHER EXPERIENCE: Best Buy, NYC (2005-07) | Footlight Records, NYC (2003-05) | Actor / Improv Performer, NYC (2000-07)

LEADERSHIP AND TECHNICAL PROJECTS

Camelot AI: A 5 DOF Robotic Manipulator and Camelot game playing Artificial Intelligence Engine <http://github.com/EasonNYC/Camelot>

- Written in Python. Themed after the sentient computer 'HAL' from "2001: A Space Odyssey."
- The AI agent controls a robotic arm to move pieces on a game board. Compatible with VREP Robotics Simulation environment.
- Implements Iterative Deepening, Alpha-beta Pruning, and partial Move Ordering.

Embedded Systems Engineer for NYU CubeSAT 2016-2017 <https://github.com/EasonNYC/NYUSat>

- Worked on the payload module for a 1U-sized mini satellite collecting weather science data.
- SW: Used FreeRTOS and STM32CubeMX to create and synchronize low level sensor device drivers with on-chip peripherals.
- HW: Performed Schematic Capture and PCB design in Altium Designer. Tested and simulated mixed signal sub-circuits using LTSpice.

Project Manager of NYU 2014-2015 NASA Robotics Competition Team <http://www.easonrobotics.com/?portfolio=nasa-lunar-mining-robot>

- Captain and Project Manager to 13 BS and MS students in a year-long NASA sponsored autonomous lunar robot design project.
- Created robot Wi-Fi communications link watchdog timer safety feature with auto reconnect ability on TCP connection dropout.
- Misc. contributions include: Team budget, recruitment, Sensor Test / R&D, Electrical Layout, LabVIEW Teleop+GUI programming.

ARM Cortex-M4 Low Level Device Driver for the Bosch BMP085 Pressure Sensor <https://github.com/EasonNYC/BMP085>

- I2C based firmware for STM32F407 utilizing the BMP's EOC pin to an external interrupt for faster data acquisition rates.