Beitong Tian

415 Cornell Street, Ithaca, NY 14850

(607) 319-9124 | bt346@cornell.edu | www.beitongtian.com

EDUCATION

Cornell University, College of Engineering, Ithaca, NY	**Southeast University**, Nanjing, China
Master of Engineering expected Dec. 2018	Bachelor of Engineering, July 2017
Electrical and Computer Engineering Major	Electronic Science and Engineering Major
Cumulative GPA: 4.2/4.3	Cumulative GPA: 3.5/4.0

RELATED COURSE

- Design with Embedded Operating Systems
- Introduction to Database Systems
- Scientific & Numerical Computation
- Computer Networks & Telcomm

WORK EXPERIENCE

Research Assistant   Feb. 2016-July 2017

Micro-Nano Biology System Lab, MEMS Lab, Southeast University, Nanjing, China

- Developed, constructed, and debugged an embedded control system based on STM32F103 to sort nematodes automatically.
- Analyzed experimental data with oscilloscope, signal generator, and spectrum analyzer.
- Programmed data process program with Matlab.
- Won the best paper in Southeast university undergraduate final project. Accepted in *Transducers2017*. *(The 19th International Conference on Solid-State Sensors, Actuators and Microsystems)*.

PROJECT

ECE5725 Course Final Project: Propeller Displayer Based on Arduino and Raspberry Pi   Nov. 2017-Dec. 2017

Team Leader, Cornell University, Ithaca, NY

- Achieved letter display, clock and music spectrum display functions in one month.
- Designed, assembled and refined the circuits and whole system structure.
- Programmed and debugged C and Python based program on Arduino and Raspberry Pi.
- Transmitted data from Raspberry Pi to Arduino via Bluetooth module for music spectrum display and controlled hall sensor, LED strip and motor in the system.
- Won the opportunity to show this project in Cornell ECE showcase.

Intelligent Interface for Fitness Center   Summer 2016

Team leader, Southeast University, Nanjing, China

- Conceptualized, developed, and produced an intelligent interface for fitness center machines based on Linux with Heart Rate sensor, EMG sensor, Camera and RFID recognition function.
- Designed and made a smart IoT device consists of infrared distance sensor, CC2541 Bluetooth module with 8051 MCU, 3D printing shell, and power supply system to automatically record exercise data.
- Presented the project in *ISIPS 2016 (10th International collaboration Symposium on Information Production and Systems)*.

National Undergraduate Electronic Design Contest: Lithium Battery Charge/Discharge System   July 2015-Dec. 2015

Team leader, Zhejiang University, Hangzhou, China & Southeast University, Nanjing, China

- Created STM32-based embedded system to implement the functions of measure, control, and display.
- Won the national 1st prize for bidirectional DC-DC converter for lithium battery system which is finished in 3 days.

Smart Car Design Contest: Dual-wheel Upright Self-Balance Robotic Car   Feb. 2015-June 2015

Team leader, Southeast University, Nanjing, China

- Used Cortex-M4-based Freescale MCU as the core to receive data from accelerometer and gyroscope and control the entire control system to keep the car upright self-balance with PID and Kalman filtering algorithm.

PATENTS

- **B. Tian**, "A New Bluetooth Audio Speaker" (Utility Model Patent), patented by State Intellectual Property Office of the PRC (Patent No.: CN 205545858 U).
- **B. Tian**, G. Hou, Z. Zhao, "A Smart Gym Lock Pin & Intelligent Gymnasium System" (Invention Patent), patented by State Intellectual Property Office of the PRC (Patent No.: CN 106310639 A).

SKILLS & ACTIVITY

Language	Fluent in Mandarin.
Hardware	Raspberry Pi, Arduino, Bluetooth, Schematic design, assembly and debug, Kinect v2, 3D-printing, RFID.
Software	Matlab, Altium Designer, Multisim, Quartus, Solidworks, AutoCad, Keil, Iar, COMSOL, VisionX.
Programming	C, C++, Java, Python, CSS, HTML, JavaScript, OpenCV, MySQL.