

# Luzhou Ye

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**Key Traits:** Innovation, problem solving, communication, and attention to detail.

**Specialties:** Embedded system circuit design, firmware, robotics, and automation.

**Technical Skills:** Digital and mixed circuit design, circuit prototyping and debugging, thru-hole and SMD soldering, and accessing and organizing electrical and electronic components.

## Education

California State University - Los Angeles (CSULA): B.S., Cum Laude.

Major: Electrical Engineering, Computer Option.

### *Engineering:*

**Programming/Environment:** C/C++, C#, Java, Matlab/Simulink, R, LabView, Keil, and AVR Studio.

**MCU:** STM32F10x/F4xx, Freescale K20/40/60, Ti MSP430/Tiva C, PSOC3/4/5, NXP 17XX, AVR Series, Arduino, Teensy, Mbed,. Specialized in using STM32 Series.

**EE/CAD:** Cadsoft Eagle, AutoCAD, Altium Designer, Pspice, VHDL, Verilog, Solidworks, and AutoDesk Inventor.

**Utility Software:** Photoshop, Adobe Premiere Pro, and MS Office.

## Professional Experience

### *Micromouse Program*

Constructed automated maze search robot to competitively navigate a 16X16 maze. Originated PCB design with all SMT components, featuring industry standard sensors/components such as gyro, IR sensors, motors with high resolution encoder, and Cortex Arm Microcontroller with positional PD controller for accurate motion control.

### *Natcar Design (2012)*

Designed an automated robot with LC tank to follow a wire track on floor powered by 75KHZ sinusoidal signal source that was the fastest car at UCSD's annual Viacar competition.

### *Project Futura*

Designed and built several high performance Kit Micromice and created open source lectures with slides and videos to educate students in construction and programming of a low-cost, high performance Micromouse. (For details, see: [http://micromouseusa.com/?page\\_id=1342](http://micromouseusa.com/?page_id=1342) ).

### *Baby-Safe Multi-Function Fan*

Designed a multi-functional, baby-safe, portable fan prototype with bluetooth remote capability. The fan adjusts speed automatically according to the environmental temperature and stops immediately when the user comes too close.

### *Personal Projects*

Independent and innovative design of multiple EE projects, specifically including design and development of unique board and programmer for various Arm Cortex MCUs. (For further details, see: [www.greenye.net](http://www.greenye.net) )

## Leadership

### *IEEE Projects Manager*

June 2011 – June 2012

- Guide and tutor more than one hundred students in EE projects and competitions.
- Establish and lead IEEE Essentials Program to successfully educate incoming freshmen and sophomores and build interest throughout the academic year.
- Design and execute various mini projects to support IEEE events.
- Handle new project requests and funding as necessary.
- Coordinate the restocking and upkeep of the IEEE student electronics lab.

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## *IEEE Micromouse Co-leader*

December - June 2012

- Manage more than 40 students in 9 teams to compete in IEEE Regional and annual California Micromouse competitions.
- Host meetings to acquaint members with various of hardware and system control theorems, such as PID control, circuit construction, and peripheral and sensor testing.

## *Extracurricular Activities*

### *All America Micromouse Competition*

2011 - 2016

- Participated in the All America Micromouse Competition and won the first place in 2013, 2014, and 2016.

### *California Micromouse Competition*

2011 - 2017

- Participated in the California Micromouse Competition and won the first place in 2013, 2014, 2016, and 2017.

### *APEC Micromouse Contest*

2013 - 2017

- Participated in the highest-level international Micromouse competition in United States as the only college student from USA and captured 5<sup>th</sup> place in 2014 and 3<sup>rd</sup> place in 2016 with the fastest Micromouse from the United States.

### *Micromouse Program*

October 2010 – May 2011

- Headed up a four-person team to build a competitive autonomous-maze-search robot.
- Won 3<sup>rd</sup> place in California Micromouse Competition.
- Designed a reliable, affordable, and easy to assemble Micromouse kit for students with less hardware experience.

### *IEEE Summer Projects*

June 2011-September 2011

- Led a ten-student team that built a gigantic 72X24 LED matrix Display and a 16X16X16 LED Cube Display to display animated patterns, which entailed exploring multi-plexing and LED array control theory.

### *MicromouseUSA.com*

November 2012 - Present

- Established and continue to maintain a non-profit educational website in order to help students and hobbyists engaged in Micromouse activities by sharing my expertise and mentoring. (As of June 2017, the site registers 3,000 visitors per month globally.)

## *Personal*

Bilingual in English and Mandarin; Naturalized U.S. citizen; Enjoy swimming, basketball, video games, blogging, travel, and ping-pong.