PROFILE

I am a newly graduated Electrical and Computer Engineering Master student at Georgia Institute of Technology specializing in VLSI design, and I finished my BS degree in Electrical and Computer Engineering Technology at Purdue University specializing in embedded systems. Right now, I am looking for opportunities for embedded systems, circuit design and firmware/software development, preferably in IoT, 3D Manufacturing, and Automotive Industry.

**** Legally authorized to work in US, Permanent Residency pending, without requiring sponsorship***

CONTACT

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ELI YU

EDUCATION

Georgia Institute of Technology
2020 - 2021
Master of Science in Electrical & Computer Engineering

Purdue University
2015 - 2019
Bachelor of Science in Electrical & Computer Engineering Technology

WORK EXPERIENCE

Teaching Assistant and Grader
Purdue Polytechnic Institute
Aug. 2017 – May 2019

- Supervised active learning lecture sections
- Provided one-to-one tutoring during lab sections
- Assisted to design homework questions for better active learning
- Graded for homework, quizzes, exams, and lab reports

Undergraduate Research Assistant
Purdue Collaborative Robotics Lab
Oct. 2016 – May 2017

- Learned about graduate-level research while assisting PhD students under Prof. Richard M. Voyles.
- Participated in robotic projects including bionic robot softskin and modular serpentine robot.

Computer Programming Lead Instructor
China Welfare Institute Children's Palace
Jun. 2016 – Aug. 2016

- Provided extra-curriculum programming tutoring on entry level C Language.
- Taught 20-student-class-size of middle and high school students.
- Offered experience and knowledge of computer hardware architecture, C language coding and practical problem solving.

HONOR

Bachelor of Science, Graduate with Distinction
Issued by Purdue University on May 2019

Dean's List & Semester Honors
Issued by Purdue Polytechnic Institute across 7 semesters from Dec. 2015 to May 2019

LANGUAGE

English (Fluent)
Chinese (native)
Japanese (Intermediate)

SOFTWARE PROGRAMMING

C, C++, C#
Python
Java
HTML, CSS
MATLAB, Simulink
LabVIEW

HARDWARE PROGRAMMING

VHDL

CIRCUIT LEVEL DESIGN

SPI
I2C, TWI, 1-wire
UART
CAN Bus
BMS (Battery Management System)
Signal Processing (Digital & Analog)
Electric Machine Drives
Wireless Networks (WIFI, Cellular, Ad Hoc, BLE)

VLSI DESIGN

Altium Designer
IC Design
Physical Design
High Level Synthesis

DEVELOPMENT PLATFORM

Linux
AVR
FPGA
PLC

PROTOTYPING

CAD (Inventor, Fusion, CATIA)
CNC
3D Printing (FDM)

PROJECT

Git
FMEA

PROJECTS

Hybrid Electric Go-Kart (Group Class Project)
A hybrid electric vehicle constructed from a scraped go-kart chassis, through performing research and utilizing existing electric vehicle systems, and designing and fabricating custom electric vehicle components.
CAN Bus, BMS (Battery Management System), Vehicle Electrical System, Harness, Embedded System

Prism Wearable Headset (Group Senior Design Project)
A personal wearable recording and data logging device designed and fabricated for early childhood autism research at Purdue University.
C#, SSH/SFTP Protocol, 3D Printing, CAD, Digital Circuit Design, Linux (RPi)

Tool Organization Solution (Individual Hobby Project)
A 3D printing solution designed, validated, and improved for organizing different kinds of tools in workbench.
3D Printing, CAD

Mic Amplifier (Individual Class Project)
A 3-stage microphone amplifier designed, fabricated, and verified, capable of handling both balanced and unbalanced input MIC signal, noise filtering, and 5-band equalizing, with 25.92 Watt of maximum output power.
Circuit Design, Signal Processing, Signal/Power Amplifier

Electric Guitar (Group Class Project)
A self-designed spaceship looking wooden electric guitar fabricated with both hand skills and CNC machining.
Acoustic Instrument Design, CAD, CNC (Computer Numerical Control)

EDB-UNIQUE (Group Class Research)
An Edge Detection Based Unsupervised Image Quality Estimation method, improved from the original UNIQUE algorithm, to better meet the need of fast expanding social network by focusing on distortion and blur types common in personal shot photos.
Image Processing, MATLAB, Python

Full project portfolio available at https://www.elizhyu.com/projects/