



GULI (ERIC) MENG

Electrical Engineer

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Skills

CAD Tools

- Solid Edge
- Cadence (OrCAD Capture, Allegro)
- ADS
- SPICE
- Electric
- Autodesk Inventor

Lab Equipment

- Soldering Station and Microscope
- Multimeter
- Oscilloscope
- Power Supply
- Battery Simulator
- Signal Generator
- Electric Load
- Network Analyzer
- Spectrum Analyzer
- National Instrument DAQ

Programming

- C/C++, Python
- Visual Basic
- Verilog
- LabVIEW
- Matlab
- HTML, JavaScript, CSS

Microsoft Office Suite

- Word
- Excel
- PowerPoint
- Access
- Visio
- Outlook

Operating System

- Windows and Linux

Core Qualification

- Knowledge in PCB-level design, simulation, layout, and testing
- Create and perform validation plan for products, verify signal integrity, and collect data for analysis
- Ability to identify failures, troubleshoot and debug corresponding technical problem, investigate root causes, and apply permanent solution
- Great interpersonal skills, strong oral and written communication skills
- Able to work independently and work with a timeline

Projects

2015 - 2016 Internship Project

Bluetooth Speaker Design

Designed a portable Bluetooth speaker to gain experience in hardware and acoustic design, I was responsible for all the electrical aspects of the project, including architecture, circuit design, schematic capture, PCB layout, parts procurement, soldering, assembly, and tests.

2018 - 2018 Master's Capstone Project

VLSI Implementation of FIR Filters

The project explores various aspects of VLSI design using FIR filters with configurable coefficients. Two fabrication process technologies (C5 process and 50-nm process) are implemented and compared, and the 50-nm process is compared with the 28-nm process Cyclone V FPGA chip.

2018 - 2018 Machine Vision Course Project

Stereo Reconstruction

Convert a pair of rectified stereo image into a 3D point set. The project was done from scratch in C++ without using the OpenCV feature matching library.

2017 - 2017 Control Systems Course Project

Peer-to-peer Teleoperation between Two Robots

The project uses two Novint Falcon robots, and the programming is done in MATLAB. A slave robot follows the path of the master robot as the master robot is being manipulated. A force feedback is implemented on the master robot if the robot experiences an external force.

2016 - 2017 Bachelor's Capstone Project

ForSight

A proof-of-concept wearable prototype that is designed to be worn by visually impaired patients in an in-door environment for navigation. OpenCV and machine learning are used to implement obstacle detection

2017 - Present Personal Website

Create a personal website based on a template, self-learning to write web pages and web applications using HTML, JavaScript, and CSS

Work experience

2017 - 2018 Queen's University

Graduate Teaching Assistance

Responsible for running workshops and labs to guide students with their term projects

2017 - 2017 PerkinElmer

Electronics Technician

Assemble electronic modules for building spectrometers, troubleshoot for any issues, manage inventory

Jan 2015 - Apr 2017 McMaster University

Physics Teaching Assistant

Prepare tutorial lessons, carry out quizzes and exercises, guide students through lab experiments, invigilate examinations, and grade tests

May 2015 - Aug 2016 Flextronics Canada

Electrical Engineering Intern

Assist senior engineers in developing products, mainly audio electronics and wearable devices. Support multidisciplinary design teams to ensure optimized electro-mechanical system

Sept 2012 -
Sept 2014

East Meets West Bistro

McMaster Hospitality Services Casual Worker

Communicate within the team to maintain high efficiency and serve customers, prepare food and set up equipment

Education

2017 - 2018

M.Eng - Electrical Engineering

Queen's University

- Academic project based program

2011 - 2017

B.Eng - Mechatronics Engineering and Management, Co-op

McMaster University

- Named to the Dean's Honour List
- Recognition for academic excellence in the final year by achieving a 10.6 GPA on the 12-point scale