# 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