

Amirali Omidfar

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Education

- University of California, Los Angeles, Master of Science, Electrical and Computer Engineering (Sep 19 - Dec 20)
 - University of California, Los Angeles, Bachelor of Science, Electrical Engineering (Aug 16- Mar 19)
- Coursework:** Deep Learning, Machine Learning, Reinforcement Learning, Embedded Systems, IoT (Internet of Things), Computational Robotics, Computational imaging, Analog Circuit Analysis, Communication Theory, Algorithms and Complexity, Linear Algebra, Probability, and Statistics
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Technical Skills

- Microcontrollers: Arduino, Raspberry Pi, STM32, ESP32, ESP8266, AVR, Dev Core boards
 - Programming languages: C, C++, Python, Javascript, Java, HTML, CSS, Scripting skills in shell and bash
 - Peripheral Communications: BLE, SPI, I2C, UART. FreeRTOS
 - Programming tools: TensorFlow, Keras, PyTorch, ROS, STM32CubeIDE and CubeMax, Atmel Studio, Version control (Git), MATLAB, Eagle PCB design software, Fusion360, OpenCV
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Certificates

- Mastering STM32CubeMX 5 and CubeIDE - Embedded Systems (Udemy)
 - Neural Networks and Deep Learning (Coursera - Sep 20)
 - NLP and Sequence Models (Coursera - August 20)
 - Convolutional Neural Networks (Coursera July 20)
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Experiences

- **TE Connectivity :**
Embedded Systems and Machine learning Intern (June 20 - Dec 20)
 - Haptic feedback controller firmware for a medical device/project using Atmel MCU
 - Natural Language Processing for designing an AI-based search engine for TE's connectors
 - Implementing Keras model on the web interface via tensorflow.js
 - Test engineer magnetic encoder system using STM Nucleo F446ZE
 - Write firmware for STM32 MCU's using STMCube ID and mbed OS compiler
 - System engineer IoT data acquisition device using an Arduino nano board with WiFi and BLE protocols
- **UCLA HCI Group (Professor [Chen](#))**
Graduate Research Assistant (May 19 - Now)
Research on interactive and ubiquitous technologies for IoT devices.
 - Designing a universal wrist-worn controller utilizing deep learning on IMU and image data
- **eHealth Research Lab (Professor Sarrafzadeh)**
Graduate Research Assistant (Jan 20- March 20)
Research on smart shoe hardware implementation to avoid toe walking in children
 - *Flex PCB Design, System integration, and Sensor Fusion*
- **UCLA [Lemur](#) (Laboratory of Embedded Machines and Ubiquitous Robots -Professor [Mehta](#)):**
Undergraduate Research Assistant (May 18 - Mar 19)
 - Autonomous flying quadcopter system with offboard sensing using:
 - Optitrack motion capture system, ROS

- **Whirlpool Corp, Iowa**

Control Engineering Co-Op (Jan 15 - Aug 15)

- LED light bulb cost optimization project (1.5 million\$ Annual Saving)
 - Statistical Analysis of luminosity and color temperature (CCT) of LED light bulbs

Class projects

- **Embedded System, UCLA** (Sep 19 - Dec 19)
 - [Indoor navigation system for visually impaired people](#)
 - UWB technology for indoor positioning
- **Introduction to Human-computer Introduction, UCLA** (Sep 19 - Oct 19)
 - Design and implement a text entry module using only 4 cm² contact area
 - Utilizing the leap motion sensor interaction
 - Web page interface in JavaScript
- **Network physical Layers, UCLA** (Aug 17 - Dec 17)
 - Design a [tracking module](#) with an iOS application interface (in SWIFT)
 - Use GPS and cellular data to find and track lost bicycles
- **IEEE at UCLA** (Aug 16 - Dec 17)
 - Projects: [Quadcopter Design](#), [Micromouse](#) (Maze Solving Robot)
- **Introduction to Embedded Systems, The University of Iowa** (Jan 16 - May 16)
 - Design an [inspection prototype device](#) for measuring luminosity and CCT temperature of the lighting assembly inside refrigerators.
- **Art and Engineering Course, The University of Iowa** (Jan 14 - May 14)
 - [Air quality Project](#): Air quality display using RGB LEDs on an (electrical conduit) tree sculpture
 - Using Arduino Uno, Raspberry Pi and featuring an online database