Amirali Omidfar

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Education

- University of California, Los Angeles, Master of Science, Electrical and Computer Engineering (Sep 19 - Dec 20) **GPA: 3.9/4.0**
- 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

Technical Skills

- Microcontrollers: Arduino, Raspberry Pi, STM32,ESP32,ESP8266, AVR
- Programming languages: C, C++, Python, Javascript, Java, HTML, CSS, Scripting skills in shell and bash
- Programming tools: TensorFlow, Keras, PyTorch, ROS, STM32CubeIDE and CubeMax, Atmel Studio, Version control (Git), MATLAB, Eagle PCB design software, Fusion360

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)

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