

# Nima Yousefi

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## Summary

Electrical Engineer with 3+ years of experience in designing and testing analog/digital circuits. Possess a master's degree from the University of Connecticut. Excellent problem-solving skills, and strong knowledge of analog and digital circuit design, embedded systems, scripting and programming languages. Capable of working in both team and self-directed settings, and committed to providing the highest quality to every project.

## Experience

**Graduate Teaching Assistant** Jan 2019 – Dec 2020

University of Connecticut, Storrs, CT

Electrical Circuits, Fall 2019/2020

- Designed, tested, and analyzed electronic circuits using lab measurement and computer tools, such as oscilloscope, voltmeter, multimeter, soldering station, and PSpice.
- Instructed experimental sessions per week for 15 undergraduate students, graded homework assignments, experiments, design project reports, exams, and evaluated papers.

Electronic Circuit Design and Analysis, Spring 2020

- Defined the operation of electronic components, such as diodes, BJTs, and FETs. Created and debugged electronic circuits.
- Directed lab sections per week for 4 groups consisting of 17 students in total, marked homework assignments, lab results, exams, and maintained student records.

Microprocessor Applications Laboratory, Spring 2019

- Used ATmega328P microcontroller in a series of labs to design microcontroller based systems, test equipment, and soldering connectors. Introduced the knowledge on C programming, using Atmel Studio 7, to program microcontrollers and debugging techniques.

**Electronics Engineer** Oct 2013 – Sep 2016

Farman Asansor Company, Tehran, Iran

- Designed electrical/electronic circuits of elevator control panels, setup motors and sensors, and installed cables of cabs.

## Education

**University of Connecticut, Storrs, CT** Jan 2019 – Dec 2020

Master of Science (MS) in Electrical Engineering, GPA: 3.54/4.0

Selected Graduate-Level Courses: Digital System Design, Advanced VLSI Design, Semiconductor Devices, Electromagnetic Wave Propagation.

**Roudehen Azad University, Tehran, Iran** Feb 2013 – Jun 2015

Bachelor of Science (BS) in Electrical Engineering, GPA: 16.21/20.0

**Pardis Azad University, Tehran, Iran** Feb 2011 – Feb 2013

Associate of Science (AS) in Electrical Engineering, GPA: 17.51/20.0

## Technical Skills

**Programming Languages:** VHDL, Verilog HDL, Python, Matlab/Simulink, C/C++

**Tools:** Xilinx ISE, Vivado Design Suite, ModelSim, Cadence PSpice, Multisim, Eagle (PCB Layout), Cadence Virtuoso, Atmel Studio, Synopsys (PrimeTime), Microsoft Office (Visio, Word, Excel, PowerPoint)

**Operating Systems:** Windows, LINUX

**Additional Skills:** ARM Processors, RTL Design

## Soft Skills

Goal-Oriented, Motivated, Self-Starter, Creative, Passion, Flexible, Communication, Presentation, Teamwork

## Selected Graduate Research Projects

**University of Connecticut, School of Engineering,** Storrs, CT

Jan 2019 – Dec 2020

*A Sentiment Analysis of Twitter Data*, Course Project, Fall 2020

- Data collected and labelled, preprocessed text data, applied supervised machine learning algorithms using scikit-learn, and performance evaluation.

*32-bit CPU Implementation based on Tomasulo Algorithm*, Summer 2020

- Implemented an out-of-order executing on a 32-bit processor by applying Tomasulo algorithm with speculative execution and ability to flush wrong path instructions.
- Configured key components such as Branch Prediction Buffer (BPB), Frontend Register Alias Table (FRAT) using Copy Free Checkpointing (CFC), and Re-Order Buffer (ROB).

*Pipelined Implementation of AES-128 Encryption*, Course Project, Spring 2020

- Optimized the architecture of an AES-128 algorithm using the pipelining technique in a hardware description language (VHDL), developed test bench, PCB layout, and synthesis.

*Quantum Dot Nonvolatile Memory (QDNVM)*, Course and Laboratory Project, Spring 2019

- Performed fabrication, device characteristics using SPICE BSIM, data and analysis evaluation, and introduced application (flash memories).

*In-Memory Computing Efficiency and Acceleration for Deep Neural*, Course Project, Spring 2019

- Analyzed RAPIDNN, NVDIMM, immunity of RRAM networks, energy efficiency with dual-mode SOT-MRAM.

## Accomplishments

- Achieved 2<sup>nd</sup> place in master's degree qualifying exam, University of Connecticut (2020).
- Selected among the top 10% of class to receive 100% scholarship for A.S. degree, Pardis Azad University (2011-2013).

## Recent Certificates

Learning Verilog for FPGA Development (Dec 2020), Advanced Python (Dec 2020).