

Languages: Python, SQL, MATLAB/Simulink, C++, HTML, CSS, JavaScript/TypeScript

Libraries: React, Flask, Redux, Material UI, Bootstrap, CarSim

Certifications: [Machine Learning](#), [Neural Networks](#), and [Deep Learning](#)

Other: Optimization, Mathematical Programming

EXPERIENCE

Coding Temple - Data Science & Software Development

09/2021 - Present

Technologies: React, Flask, JavaScript/TypeScript, HTML, CSS, Python, PostgreSQL

- Script a Python code to build an automated rental property calculator using OOP
- Create my personal portfolio website using React and Material UI
- Design a weather web app with adaptive background based on the weather condition
- Program a Python script to manage parking garage spaces and handle automatic ticket selling
- Architect ERD of application and generated various SQL tables in PostgreSQL

Personal Studies - Machine Learning & Deep Learning

04/2020- 08/2021

Technologies: Python, MATLAB

- Applied regularized logistic regression to predict whether microchips from a fabrication plant pass quality assurance (QA)
- Implemented linear regression to predict profits for a food truck based on the populations from the cities
- Used principal component analysis (PCA) to find a low-dimensional representation of face images
- Tested the anomaly detection algorithm and applied it to detect failing servers on a network

University of Florida - Research Fellow

05/2016 - 08/2018

- Designed and Introduced, for the first time, the optimized learning controllers by applying the energy-based control methods (passivity) to a motorized nonlinear cycle-rider hybrid system
- Developed an advanced adaptive learning controller for a nonlinear, time-varying switched system based on the Iterative Learning Control (ILC) scheme and passivity properties
- Achieved the optimized tracking performance, error of less than 5%, for the therapeutic cycling system induced by Functional Electrical Stimulation (FES) with seven participants by implementing the learning controller via MATLAB/Simulink

University of Notre Dame - Graduate Student Researcher

01/2012 - 05/2017

- Optimized the switched controller's performance by applying the energy-based control methods in Adaptive Cruise Control (ACC) and Lane Keeping Control (LKC), using MATLAB/Simulink and CarSim
- Designed switched controllers using a unique passivation method for hybrid systems to circumvent the challenges of traditional methods
- Simplified the complexity of multi-agent systems by employing the concept of symmetry and passivity to study the stability of large-scale systems
- Assisted in teaching the graduate course Linear Systems (30 students) and undergraduate course Signals & Systems (50 students)

Leadership & Service

2012 - 2016

- President of Society of Women Engineers, University of Notre Dame
- International Ambassador, University of Notre Dame

EDUCATION

University of Notre Dame, *Ph.D. & M.S. in Electrical Engineering*

2012 - 2017

Worcester Polytechnic Institute, *Electrical & Computer Engineering*

2010 - 2011