

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

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

**Other:** Optimization, Mathematical Programming

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## EXPERIENCE

### Coding Temple - Software Development & Data Science

09/2021 - Present

*Technologies: HTML, CSS, Python, PostgreSQL*

- Script a Python code to build an automated rental property calculator using OOP
- Create sign-in and sign-up pages using CSS & HTML and collaborate with my team members designing the rest of the website
- 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

### 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