

# Taylor C. Nunes

+1 (910) 264-6526 • taylorcnunes@gmail.com  
7862 Ahsford Glen Ct, West Chester OH 45069

## EDUCATION

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**Osaka University**  
Master of Science, Physics

*October 2019 - September 2021*  
GPA: 3.83/4.00

**North Carolina State University**  
Bachelor of Science, Mechanical Engineering

*August 2014 - May 2018*  
GPA: 3.94/4.00

## EXPERIENCE

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**KOTO Collaboration**  
*Master's Student*

Osaka, Japan  
*Oct 2019 - Sep 2021*

- Shape detection with discrete transforms on low resolution waveforms.
- Event by event waveform processing for noise separation in radiation detectors
- Particle detector development and implementation with feasibility, calibration, and performance analysis.
- Development of real-time monitor software and alert system to store and display detector variables.
- Give technical presentations and conferences and events based on research and papers
- Developed primarily in C++, Python, ROOT, and Bash, in a Linux environment.

**Symbrium**  
*Associate Project Engineer*

Raleigh, United States  
*Jun 2018 - Mar 2019*

- Improvement of user interface for communicating between Windows, SQL, and low-level control hardware.
- Analysis of gear material strength data to determine the lifetime of parts.
- Development and implementation of control electronics, testing protocol, and analysis method.
- Developed primarily in C# and Python with some low level proprietary software.

## ACTIVITIES

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**Github**

<https://github.com/TaylorNunes>

- Face mask classification using deep learning in Tensorflow and keras.
- Japanese-language data-scraping pipeline to auto generate language learning flashcards
- Algorithmic unique image generation in Javascript

**Other**

- Home automation integration using a raspberry pi, home assistant, and docker.

## SKILLS

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**Programming skills:**

Python, Tensorflow, Keras, PyTorch, C++, Bash, Git, Jupyter, SQLite, Javascript, Docker, MATLAB

**Languages:**

English (Native), Japanese (Conversational)