

# Erin Murphy

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## EDUCATION

**Florida State University** – Tallahassee, FL

**Graduation: May 2023**

*B.S. in Computer Engineering, Minors in General Business & Math*

**GPA: 4.0/4.0**

- **Coursework:** Data Structures & Algorithms, Machine Learning, Digital Signals, Advanced Microprocessors
- **Honors/Awards:** National Merit Scholar, Atlantic Coast Conference Top Service Athlete, FSU Presidential Scholar, AT&T oxyGEN Scholar, IDEA Research Grants (\$3,000 and \$6,000), Mores Torch Award

## WORK EXPERIENCE

**Jabil** – St Petersburg, FL

**May 2022 – August 2022**

*Information Technology Intern – Power Platform*

- Developed an application to survey 1,200+ Power Platform app owners to reduce duplicate app functionality by 15%
- Created a ServiceNow and Agile training directory used by 400+ project managers with over 200 site visits per week

*Information Technology Intern – Project Management*

**May 2021 – August 2021**

- Created a project charter and workstreams for a \$10 million AWS partnership to re-structure cloud capabilities
- Developed 5 automated Grafana key performance indicator dashboards to monitor cloud compliance and resources
- Collaborated on an enterprise-wide governed data lake, extract-transform-load processes, and CI/CD pipelines

**Wyzant** - Remote

**June 2020 – Present**

- 300+ hours of SAT, ACT, calculus, physics, and programming tutoring

## PROJECTS

**Actif – Active Learning Application**

- Local host interface for training image classification models in PyTorch using novel active learning techniques
- Designed a Svelte-based GUI for configuring hyperparameters and labeling images in a SQL database
- Communicated with a Python and Flask backend via WebSockets to schedule training and active learning stages

**Image Recognition for Pad-Mounted Equipment**

- Project sponsored by Florida Power and Light to locate faulted pad-mounted transformers using autonomous drones
- Developed synthetic training data by combining Google Street View images with rendered 3D models in Blender
- Improved YOLOv5 accuracy from 82% to 98% for multi-class detection of faulted transformers from a 50ft distance

**Elliptic Curve Visualization**

- Cryptography-inspired web application to graph elliptic curve point addition across the real numbers and a finite field
- Connected Heroku hosted site with an HTML/CSS-based GUI to a NumPy and Matplotlib backend using Flask

## LEADERSHIP

**NCAA D1 Beach Volleyball** – Tallahassee, FL

**January 2020 – Present**

*Service Captain*

- Initiated a partnership between FSU Athletics and Big Brothers Big Sisters to provide public school mentoring
- Coordinated over 1,000 hours of community service and weekly events with the Student Athlete Advisory Council
- Led beach volleyball to win the Director's Cup for the most service hours of all FSU teams for three years in a row

**Florida State University MLab** – Tallahassee, FL

**September 2019 – Present**

*Co-founder*

- Co-founder of the MLab – FSU's first undergraduate machine learning research center
- Produced a database of over 10,000 synthetic sea turtle images for conservation research using a Blender production pipeline and Generative Adversarial Networks (GANs)
- Published and presented work on synthetic data at four conferences, including the Harvard National Collegiate Research Conference and the IEEE-ICIET Conference

## TECHNICAL SKILLS

**Programming Languages:** C++ (proficient), Python (proficient), VHDL (proficient), HTML/CSS (proficient), MATLAB (proficient), JavaScript (prior experience)

**Skills & Frameworks:** Git, React, UNIX, Agile