

ERIN MURPHY

New York, NY | 727-424-6979 | eam427@cornell.edu | [linkedin.com/in/erinmurphy11](https://www.linkedin.com/in/erinmurphy11) | github.com/erinmurphy11

EDUCATION

Cornell Tech (Cornell University), New York, NY May 2024
Master of Engineering in Electrical and Computer Engineering

- **Relevant Coursework:** Applied Machine Learning, Robot Perception, Computer Systems and Architecture, Product Studio
- **Honors:** Cornell Merit-Scholarship, Center for Cyber Safety and Education Women's Scholarship

Florida State University (FSU), Tallahassee, FL May 2023
Bachelor of Science in Computer Engineering | GPA: 4.0

- **Relevant Coursework:** Data Structures and Algorithms, Linear Algebra, Probability and Statistics, Digital Signal Processing
- **Honors:** Presidential Scholar, NCAA D1 Beach Volleyball National Runner-Up, IDEA Research Grant, National Merit Scholar

TECHNICAL SKILLS

Coding Languages:	Python, C++, HTML, CSS, PowerShell, SQL, JavaScript
Operating Systems:	Windows, UNIX, Linux
Skills and Frameworks:	React, PyTorch, Docker, PostgreSQL, Agile, Git, PowerBI

EXPERIENCE

Ernst & Young, Technology Consulting Intern, New York, NY Jun 2023 – Aug 2023

- Assisted with project management across 6 focus areas for a CTO-sponsored initiative defining an Enterprise Transformation Strategy of the future state of technology and data center migrations for a major banking client
- Drafted a 4-year roadmap for migrating two data centers to AWS DynamoDB and implementing a Backstage portal to onboard developers, reducing the projected time to provision infrastructure and manage permissions by 50%

Keysight Technologies, Software Engineer Intern, Remote Jan 2023 – May 2023

- Developed a containerized Django and PostgreSQL application to track over 20,000 internal orders and accessories
- Designed a ReactJS dashboard for the application and implemented authentication using the MSAL-React library
- Used PowerShell to automatically monitor all scripts for the identity team, reducing the daily time spent detecting errors by 89%

Jabil, Software Engineer Intern, St Petersburg, FL May 2022 – Aug 2022

- Created a PowerBI dashboard used to identify Power Platform applications and flows with duplicate functionality and used the results to reduce the company's total Power Platform subscription costs by 22.3%
- Prototyped 5 Grafana key performance indicator dashboards to monitor a 5-year data migration to the cloud

Florida State University MLab, Machine Learning Research Assistant, Tallahassee, FL Sept 2019 – May 2023

- Co-founded the MLab: FSU's first interdisciplinary machine learning research center open to undergraduates
- Presented on the trends in synthetic data and machine learning training at Harvard's National Collegiate Research Conference
- Utilized OpenPose pose estimation with the FSU NCAA Beach Volleyball team to help players analyze their arm swings.

SELECTED PROJECTS & PUBLICATIONS

Mobile Steganography Network (Python) – github.com/erinmurphy11/tiktoksteg

- Incorporated depth-wise separable convolutions within a video steganography U-Net architecture
- Trained the resulting model on mobile video frames scraped using the TikTok-Scraper API, resulting in a light-weight model with 99.5% fewer parameters than the original that could still successfully hide data in mobile videos

Image Recognition for Pad-Mounted Equipment (Python, Blender) – *Patent pending*

- Project mentored by NextEra Energy using computer vision to locate faulted pad-mounted transformers in real-time from autonomous drone footage – proof of concept resulting in an average decrease of 80% in the time to locate faults
- Trained a YOLOv5 computer vision model with an mAP of 98.91% for multi-class detection of faulted transformers

Evaluating Synthetic Visual Data for Real-Time Object Detection (Python, Blender) – ieeexplore.ieee.org/document/9639326

- Generated a repository of synthetic training images of sea turtles via Python multiprocessing and Blender via the BPy API
- Trained YOLOv3 on synthetic and authentic images and found that including synthetic data resulted in a mAP increase of 9.68%
- Presented proceeding at the 2021 6th International Conference on Communication, Image, and Signal Processing (CCISP)

LEADERSHIP & EXTRACURRICULARS

Volunteering: Coordinator for FSU Student-Athlete Advisory Council – organized volunteering events for student-athletes and led the beach volleyball team to receive the Director's Cup for the most community service hours of any athletics team for 3 consecutive years

Mentoring: Mentor for Big Brothers Big Sisters of the Big Bend and the FSU-FAMU College of Engineering Mentors program

Tutoring: 300+ hours of experience tutoring mathematics, object-oriented programming, writing, and standardized test prep