Jillian To

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Education

Stevens Institute of Technology — Hoboken, NJ
Master's in Computer Science — *Jan. 2025 – Dec. 2028*

Rowan University — Glassboro, NJ
Bachelor of Science in Electrical and Computer Engineering (GPA: 3.858) — *Sep. 2021 – May 2025*
Minor in Computer Science (GPA: 4.000)
Certificate of Undergraduate Study in Applied Machine Learning (GPA: 4.000)
Certificate of Undergraduate Study in Combat Systems Engineering (GPA: 3.850)

Experience

Digital Software and Firmware Engineer — June 2025 – Present
Lockheed Martin — *Moorestown, NJ*

- Maintain Secret US security clearance as earned in previous internships
- Develop C and C++ software and firmware for active electronically scanned array (AESA) radars
- Debug and resolve software issues in labs, involves real-time testing and viewing system logs

Power System Engineer Intern — May 2024 – Aug. 2024
Lockheed Martin — *Moorestown, NJ*

- Replaced power modules in auxiliary power systems (APG) of multi-kilowatt (kW) capacity
- Assisted in design of 0.5kW power system with Altium Designer to create PCB schematics and layouts and LTSpice to simulate the circuits
- Created alternative studies for replacement of obsolete components, involved interpreting manufacturer datasheets
- Tested and validated component specifications with OMICRON Bode 100 Vector Network Analyzer

Software Engineer Intern — May 2022 – Aug. 2022, May 2023 – Aug. 2023
Lockheed Martin — *Moorestown, NJ*

- Used Red Hat 7 and 8 Linux (RHEL) terminals to develop C++ software for radar systems, including feature implementations and bug fixing
- Used GNU Debugger (GDB) to debug C++ software
- Used MATLAB to analyze and verify data, including utilized radar resources and tracking and search performance
- Used Python, Bash, and Rust scripting to automate system maintenance processes

Projects

Machine Learning for Generative Audio Declipping | https://github.com/JillianTo/ML_Music_Declipper

- Created custom CNN architecture with LSTM bottleneck in PyTorch to remove clipping and distortion from music

Robust Image Classification with Training Data Attribution | https://github.com/nielseni6/TDA_Training

- Created custom loss function that incorporates training data attribution and is compatible with various CNN-based image classification models
- Made models more robust and increased accuracy
- Managed Linux compute/storage server for eight team members to simultaneously develop on

Texas Hold 'Em Poker Deep Q-Learning Agent | https://github.com/JillianTo/neuron_poker

- Added a PyTorch Deep Q-Learning agent to the popular neuron_poker GitHub repository

Automatic Plant Waterer | https://github.com/JillianTo/PoundsTo—EmbeddedFinal-Project—WateringSystem

- Wrote C code for TI MSP430 microcontroller that monitored and automatically watered plant to meet moisture threshold
- Was able to upload and record moisture level through WiFi to Thingspeak for users to view

Technical Skills

Languages: C/C++, Python, Bash, Rust, Java, HTML/CSS
Developer Tools: Git, Docker, Podman, VS Code, Visual Studio, Eclipse, Vim, GDB, Make, CMake, Github, Gitlab, Bitbucket, Jira, RHEL, Ubuntu Linux, Arch Linux
Libraries: PyTorch, pandas, NumPy, Matplotlib