

Melody Nguyen

New York, NY | melody.nguyen@pace.edu | 669-240-9976 | [LinkedIn](#) | [GitHub](#) | [Portfolio](#)

PROFILE

Data scientist and research technologist with experience in Python automation, machine learning pipelines, data processing, and interactive scientific tools. Strong foundation in algorithms, ML, and software engineering, with hands-on experience building scalable, reproducible systems at national labs.

TECHNICAL SKILLS

Programming Languages: Python, Java, SQL, R, C, JavaScript (React)

- **ML/AI:** Scikit-learn, NumPy, Pandas, SciPy, Matplotlib, Seaborn
- **Tools:** Git, GitHub, AWS, Marimo, Jupiter, Tableau, Linux, Bash
- **Web Dev:** HTML/CSS, JavaScript, React, Jekyll, APIs
- **Concepts:** OOP, Data Structures, Algorithms, ML Pipelines, SDLC, Automation

PROFESSIONAL EXPERIENCE

Engineering Intern

Stanford Synchrotron Radiation Lightsource (SSRL)

Stanford, CA

Jun 2025 – Aug 2025

- Built Python automation to streamline X-ray diffraction data collection across 130+ runs
- Developed ML-based peak detection models and scalable pipelines for high-volume scientific data

Product Ambassador & Software Contributor

marimo.io

New York, NY

Sep 2024 – Dec 2024

- Developed interactive Python notebooks demonstrating reproducible scientific computing
- Contributed code, documentation, and UI/UX feedback to enhance platform interactivity
- Authored tutorials in Python data visualization, increasing adoption among researchers

Data Science Intern

SLAC National Accelerator Laboratory, U.S. Dept. of Energy

Stanford, CA

Jun 2024 – Aug 2024

- Analyzed 60+ photovoltaic datasets using Python, Pandas, and ML techniques
- Integrated NOAA + NREL data into automated pipelines for multi-state climate modeling
- Built visualizations and geospatial tools to support renewable grid resilience research

Software & Web Developer

SLAC National Accelerator Laboratory, Applied Energy Division

Stanford, CA

Mar 2023 – Jun 2024

- Developed and maintained 5+ grid-simulation platforms (HTML/CSS, JavaScript, and Jekyll)
- Built analytics dashboards to measure platform usage and performance
- Wrote documentation and onboarding guides for cross-functional engineering teams

PROJECTS & RESEARCH

Autonomous DIF Experimentation Logic

2025

- Designed ML-based peak scanning + automated phase detection
- Improved experiment efficiency across high-temperature diffraction cycles

Extreme Weather + Solar Performance Modeling — Python

2024

- Merged NOAA + NREL datasets to quantify grid stress events
- Visualized cross-regional performance losses during heatwaves

EDUCATION

Pace University, Seidenberg School of Computer Science and Information Systems

New York, NY

Bachelor of Arts (BA) in Computer Science | Minor: Business | Dean's List | GPA: 3.81

May 2026

- **Honors Thesis:** Digital Pollution: Understanding Energy Costs of Large Language Models
- **Relevant Coursework:** AI, Software Engineering, Machine Learning, Data Science (Python/R), Algorithms, Networks and Internet, OOP, Data Structures, Research Methods
- **Leadership:** President, Institute of Operations Research and Management Sciences

Cornell University, Product Management Certificate

New York, NY

Product hypothesis & personas, roadmap, prototyping, analytics, engineering and execution

Feb 2026