

# NELS MARTIN

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## SUMMARY OF QUALIFICATIONS

- Proficient in **Python, Java, Lean**; working knowledge of **C, SQL, Bash**.
- Strong **software engineering** foundation from coursework in **data structures, algorithms, databases, and machine learning**.
- Experience building end-to-end projects: from **formal methods and proofs (Lean)** to **ML models in PyTorch** and **prototype software systems**.
- Demonstrated **collaboration, leadership, and communication** through team projects, research contributions, and directing extracurricular organizations.

## EDUCATION

**University of Washington** | Seattle, WA

**B.S., Electrical and Computer Engineering (ECE)**

*Expected June 2026*

- Data Structures and Algorithms, Intro to Database Systems, Digital Systems, Machine Learning for Signal Processing.

**EE 443: Machine Learning for Signal Processing Applications (Grade: 3.8)**

*Fall Quarter 2025*

- Projects in **PyTorch**:
  - Built **CNNs** for object detection and video tracking.
  - Implemented **diffusion models** for image and video generation.
  - Developed **GAN** for image generation and segmentation tasks.

## RELEVANT EXPERIENCE

**Undergraduate Researcher – Lean Research Group** | UW

*March 2025 - Present*

- Wrote formal proofs of computability theorems in **Lean**, including DFA/NFA models and regular language theorems.
- Authored annotated proofs for use in future UW course material. Collaborated with faculty to integrate work into a [published online book](#).
- Developed an automated DFS-based theorem proving system using Python and Lean. Currently researching RL for automatic theorem proving.

**Software/Systems Intern – nLIGHT** | Camas, WA

*July 2023 - Sep 2023*

- Programmed and calibrated prototype LiDAR cameras in **Python, LabVIEW, and Linux**.
- Delivered four functional prototypes used in investor presentations, directly supporting product strategy.
- Increased department efficiency by improving the camera construction documentation.

## ADDITIONAL EXPERIENCE

**Director and Performer – The Collective Improv Troupe** | UW

*October 2022 - Present*

- Selected as 1 of 5 performers from 60+ auditionees.
- Performed in biweekly shows (audiences 150+), strengthening teamwork and quick decision-making.
- Applied strong communication and leadership skills to direct the annual Collective sketch show.

**Electrical Engineering Intern – Korry Electronics Co** | Everett, WA

*June 2024 - September 2024*

- Resolved 100+ engineering problem reports by building test circuits and debugging designs.
- Utilized Simetrix, PADs, and Xpedition, and communicated with many departments (engineering, manufacturing, purchasing, etc.) to gather information to close out the problem reports.
- Partnered with cross-functional teams to improve internal documentation.

