

Robin Teng

✉ rob@robinteng.com | 🏠 robinteng.com | 🌐 linkedin.com/in/Rob10

Education

University of California – Santa Barbara

Santa Barbara, CA, USA

Bachelor of Science in Electrical Engineering with Physics Minor

Sept 2022 – Present

- **Expected Graduation Date:** June 2026
- **GPA:** 3.6
- **Honors & Awards:** CNSI Propel Fellowship (2025), Dean's Honors (2025 – 2026)
- **Coursework:** Solid State Device Physics, Photonics and Optoelectronics, Bandgap Engineering, MOCVD, MBE, IC Design and Fabrication, MEMS, Analog Design, Signal Analysis, Quantum Physics, Electromagnetism, Thermodynamics, Data Structures and Algorithms, Machine Learning, Manufacturing Methods, Materials, Discrete Math, Calculus, Linear Algebra, Statistics and other supplementary math courses

Professional Experience

Quantum Photonics Lab (QPL)

Santa Barbara, CA, USA

Undergraduate Researcher

Sep 2025 – Present

- Developed high-purity, high-coherence single-photon emitters (SPEs) for quantum computing and communication applications.
- Engineered electrical gating for defect-based quantum emitters on 2D materials (hBN) utilizing graphene contacts.
- Conducted comprehensive optical and electrical characterization of high-purity near-infrared (NIR) single-photon emitters.
- Analyzed existing literature on figures of merit for various SPEs, to benchmark hBN emitter performance.

Solid State Lighting & Energy Electronics Center (SSLEEC)

Santa Barbara, CA, USA

Undergraduate Thesis Project

Sep 2025 – Present

- Developing a GaN microLED-based VLC system for chip-to-chip data center communication.
- Designed and built a free-space optical testbed to emulate and test physical data links.
- Designed mask layouts for microLED arrays used in optical transceivers.
- Evaluated various encoding schemes and proposed multiplexing architectures to scale future transceiver bandwidth.

Mirios Inc

Santa Barbara, CA, USA

Process and Testing Intern

Apr 2025 – Jul 2025

- Constructed free-space optical setups and characterized the performance of photonics chips.
- Developed and ran novel deposition and etching processes for mid-infrared integrated photonic devices.
- Validated the efficacy of newly developed cleanroom processes by directly analyzing the resulting optical performance.

UCSB Nanofabrication Facility

Santa Barbara, CA, USA

Process Engineer Intern

Mar 2024 – Apr 2025

- Performed routine metrology and statistical process control (SPC) to qualify cleanroom equipment to strict industry specifications.
- Refined calibration protocols for etching and deposition tools, and authored standardized process travelers.
- Trained incoming interns on Class 100 cleanroom protocols, including PPE compliance, waste disposal, and chemical handling.
- Developed custom test patterns and established entirely new calibration procedures for the Heidelberg MLA.

OPUS Lab Research

Santa Barbara, CA, USA

Undergraduate Researcher

Nov 2023 – Mar 2025

- Investigated probabilistic computing by emulating Ising and Boltzmann machines on FPGAs.
- Simulated probabilistic logic gates in MATLAB to evaluate performance in energy-based models.
- Experimented with Boltzmann-based Transformers to optimize attention mechanisms in Large Language Models (LLMs).
- Implemented and tested a prototype Transformer model for language translation using Python and PyTorch.

UCSB Society of Automotive Engineers (SAE)

Santa Barbara, CA, USA

(VCU) Vehicle Control Unit Designer

Sept 2022 – Jan 2024

- Developed a C++ state machine on a Teensy 4.1 to manage motor I/O, charging logic, and sensor processing.
- Integrated critical vehicle control firmware for UCSB's first-ever Formula SAE Michigan race car.

Personal Projects

- Self-hosted Cloud Server – Running an Ubuntu server out of my garage and hosting a cloud server with Apache2 on my domain, with a RAID 5 configuration. (Aug 2023)
- LoRa Communication Radio Network – Built an encrypted radio communication mesh network from multiple 915MHz nodes which could relay messages via Bluetooth. Stable range ~15km. (Nov 2023)
- More projects on my personal website that I built using HTML, CSS & JS: <https://robinteng.com> (Aug 2024)

Skills

Programming

Python/Pytorch, C++, Matlab, SystemVerilog, Linux Bash, $\LaTeX$, Git, HTML/CSS/JavaScript, SQL.

Nanofabrication

SEM, ASML DUV Stepper, Heidelberg MLA, ICP/DRIE, Wet Etch (HF), PECVD, IBD, E-beam Evaporation, Dicing Saw, General Metrology

CAD

Solidworks, Fusion 360, KLayout, L-Edit, EAGLE PCB, KiCad, 3D Printing Slicer, Blender.

Manufacturing/Prototyping

3D Printing, CNC Machining, Lathe, Laser Cutting/Engraving, Band/Miter/Cold Cut Saw, Composite Layup, MIG Welding, Soldering.

Communication Skills

Technical & General presentation, English(Fluent), Mandarin(Fluent), Social Media Marketing.

