

# Robin Teng

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## 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:** 3.54
- **Coursework:** Solid State Device Physics, Photonics, Integrated Circuits Design and Fabrication, Analog Circuits, Circuit Logic and Design, Signal Analysis, Electromagnetism, Thermal Dynamics, Quantum Physics, Data Structures and Algorithms, Machine Learning, Manufacturing Methods, Materials, Discrete Math, Calculus, Linear Algebra, Statistics and other supplementary math courses .....

## Personal Experience

### Quantum Photonics Lab(QPL)

Santa Barbara CA, USA

Undergraduate Researcher

Sep 2025 - Present

- Develop and test various fabercaiton processes for cavity enhanced quantum emitters on 2D materials
- Optical and electrical testing of high purity single photon emitter

### Mirios Inc

Santa Barbara CA, USA

Process and testing Intern

Apr 2025 - Jul 2025

- Free space optical testing of photonics chips
- Assisted in fabrication of integrated photonic devices(mid-inferred)
- Experimented and validated new tools for fabercaiton processes

### UCSB Nanofabrication Facility

Santa Barbara, CA, USA

Process Engineer Intern

March 2024 - Apr 2025

- Comfortably work in class 100 clean room practicing standard cleanroom safety & protocols (PPE, safe waste disposal, chemical handling, etc).
- Created process travelers for new processes and trained other interns.
- Developed various test patterns for MLA calibration and process control
- Test run and record various data on different tools and samples for process control. Tools that I am proficient on are:
  - lithography: Photo-lithography with ASML DUV stepper, Heidelberg MLA, mask aligner, spinning photo-resist, using developer
  - Dry etching: Various ICP etching machines, mostly with SiO2 and InP, Oxygen Plasma Systems
  - Wet etching: HF, Piranha, Developer, and other etchant mixes (NH4OH, H2O2, H2SO4, H3PO4)
  - Deposition: PECVD of SiO2 and Si3N4, Ion Beam Deposition of SiO2, Ta2O5, Al2O3, Si3N4, TiO2, E-beam Evaporation of Ti/Au, Al, Al2O3
  - Metrology: SEM, Ellipsometer, Tencor Flexus, KLA Surfscan, Profilometer, Mapping Reflectometer, four-point probe, optical microscope
  - Misc: Oxidation furnace, Diffusion furnace, Annealing, Dicing saw,

### OPUS Lab Research

Santa Barbara, CA, USA

Undergraduate Researcher

Nov 2023 - Mar 2025

- Researching about efficient computing through the use of probabilistic computing on physics based models namely Boltzmann machines and Emulations of Ising machine on FPGAs
- Working with mentor on simulations of probabilistic computing logics on matlab
- Experimented with the use of Boltzmann Model on the transformer architecture used for training LLMs.
- Implementing and testing prototype of transformer model used for language translation built in Python with Pytorch.

### UCSB Society of Automotive Engineers(SAE)

Santa Barbara, CA, USA

(VCU)Vehicle Control Unit Designer

Sept 2022 - Jan 2024

- Collaborated in a four-person team to develop a state machine for the VCU in C++ for our race car.
- We ran all processes on a Teensy 4.1 which controls the motor input output, charging logic, sensor input processing and error interrupts.
- Our car went on to compete at Formula SAE Michigan

### Personal Projects

- Undergraduate Thesis Project - Optical communication via GaN LEDs for next gen Chip to Chip communication in data centers, sponsored by SSLEEC. (Ongoing)
- Self-hosted Cloud Server – Running a 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: <https://robinteng.com> (Aug 2024)

## Skills

#### Programming

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

#### CAD

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

#### Manufacturing/Fabrication

Clean room skills as listed in experiences, 3D printing, CNC machining, lathe, laser cutting/engraving, band/miter/cold cut saw, composite layup, MIG welding, soldering.

#### Miscellaneous

Communication Skills, Public Speaking, English(Fluent), Mandarin(Fluent), Social Media Marketing.

