
Ricardo Gonzales

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EDUCATION

University of California, Davis, Davis, California

Expected June 2026

- Bachelor of Science in Computer Engineering
- AvenueE Scholar, EOP Student, TRIO SSS Member

Oxnard College, Oxnard, California

Graduated May 2024

- Associate of Science in Math & Physics
- SHPE President, TRIO SSS Member, EOPS Student, OMEGA Participant, STEM Tutor

SKILLS AND COURSEWORK

Programming: x86 Assembly, Python, C++, Git, MATLAB

Software: Blender, Solidworks, DaVinci Resolve, Arduino, KLayout, OrCAD, PSpice

Hardware: Optical bench/lasers/mirrors, breadboard design, computer assembling

Coursework: Algorithm Design and Analysis I, Circuits II, Electromagnetics I

EXPERIENCE

Undergrad Quantum Photonics Research Assistant, University of California, Santa Barbara

June 2024 – August 2024

- Collaborated with two graduate students to investigate quantum photonic devices with light entanglement
- Designed and animated photonic chips and optical components from Thorlabs using Blender
- Explored and collected data of photoluminescence processes and simulated it with KLayout
- Exfoliated two-dimensional materials for single photon emitters and tested them

STEM Tutor, Oxnard College

August 2022 – May 2024

- Tutored +200 hours of engineering math, physics, and chemistry courses in English & Spanish
- Organized group tutoring sessions to assist students for team effort learning
- Provided full instructional support for students who were unable to attend regular classes
- Embedded classroom tutor that discussed concepts taught in class and created classroom activities

Medical Caregiver, Camarillo Healthcare District

October 2021 – May 2024

- Made healthcare appointments for clients and transported them to their destinations
- Supported daily living activities by assisting with hygiene, health, and household chores
- Administered medication and provided physical therapy to clients

Store Manager, Ceci's Produce

September 2019 – December 2021

- Kept financial records accurate, current, and compliant by monitoring records and addressing transactions
- Compiled daily sales reports for different products and arranged daily actives and passives using Excel
- Organized produce from the store and prepared social events for business growth

PROJECTS

Photoluminescence Spectroscopy Setup

- Assembled an optical photoluminescence setup consisted of optical components such as mirrors and lasers brought from Thorlabs
- Implemented a better layout for a spectrometer for larger rate increase of single photon emitters
- Animated all the optical components using Blender and produced a final video demonstration of the setup

Quantum Photonics Simulation

- Designed a quantum phonic chip using KLayout and animated it in Blender to demonstrate two-photon interference
- Worked with special modeling techniques in Blender such as geometric nodes, shading, and camera movement for a final video
- Used light entangled animation to demonstrate a famous effect in quantum phonics for better audience visualization and comprehension

CERTIFICATIONS

International Tutor Training Program Certification (ITTPC), Level I & II

American Caregiver Association Certification

Northrop Grumman Scholarship Recipient