

Robert Pearce

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Education

UNIVERSITY OF NEVADA LAS VEGAS | Las Vegas, NV

Bachelor of Science Computer Science

June 2026

GPA: 3.7

COLLEGE OF SOUTHERN NEVADA

Associate of Business

June 2022

GPA: 3.8

Technical Skills

Languages: Proficient: C++ | Python | Assembly

Familiar: HTML | CSS | JavaScript | SQL | Rust

Operating Systems: Linux | Windows | MacOS

Tools: Visual Studio Code | Anaconda | PyCharm | RustRover

Relevant Coursework

Compiler Construction: Designed and implemented key components of a working compiler, including lexical analysis, parsing, semantic checks, and code generation.

Machine Learning: Applied supervised and unsupervised learning algorithms to real-world datasets using Python-based tools.

Project Experience

kSZ Optical Depth Prediction *Python / PyTorch / Matplotlib / CUDA* **May 2025**

- Built a CNN to estimate optical depth of the early universe from 1024x1024 kSZ heat maps modeling reionization scenarios.
- Processed 1,000 simulated datasets from Dr. Paul La Plante, with GPU-Accelerated training and custom PyTorch dataset handling.

Projectile Motion Simulator *Python / NumPy / Matplotlib / Pytest*

June 2024

- Developed a Python program to calculate and visualize projectile trajectories based on user-provided launch angle and velocity.
- Integrated NumPy for calculations, Matplotlib for trajectory plots, and Pytest for validation with OpenStax textbook examples.

8 Queen Chess Puzzle *C++ / Recursion / Backtracking Algorithm*

Apr 2023

- Implements a recursive backtracking algorithm to place 7 additional queens on a chess board in a way where no 2 queens threaten each other. Code available upon request.

Relevant Work Experience

Supplemental Instruction Math Leader

Las Vegas, NV

College of Southern Nevada

Aug 2023 - Present

- Plan and conduct 3-4 study sessions per week throughout the term, using strategies learned in SI Leader Training to prepare and provide aid to 80+ students a semester.
- Made supplementary videos covering notoriously difficult concepts such as difference quotient, asymptotes, and related rates.

STEM Mentor

Las Vegas, NV

University of Nevada Las Vegas

May 2025 – May 2025

- Taught block-based coding to ~200 students using the Sphero Edu platform to control Sphero BOLT robots.
- Led hands-on lessons in programming movement, custom LED matrix designs, and sound.

STEM Mentor

Las Vegas, NV

University of Nevada Las Vegas

May 2024 – June 2024

- Oversaw a group of 5 middle school students in completing programming projects using C++ and Arduino.
- Provided personalized guidance and support to facilitate the development of STEM identity among mentees.

CERTIFICATES

HARVARD CS50 PYTHON

June 2024

edX HarvardX

IBM DATA STRUCTURES AND ALGORITHMS USING C++

Dec 2023

edX