Robert Pearce

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Education

UNIVERSITY OF NEVADA LAS VEGAS | Las Vegas, NV   **June 2026**
Bachelor of Science Computer Science   **GPA:** 3.7

COLLEGE OF SOUTHERN NEVADA   **June 2022**
Associate of Business   **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