

# Spencer Farley

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**Objective:** Entry-level software developer with strong foundations in Python, Java, and C, and hands-on experience in robotics, 3D graphics, and cybersecurity. Eager to contribute to innovative projects while growing technical expertise in a collaborative team environment.

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## Experience

**Optikel Instruments - Software Developer (Team Project)** Jan 2025 - May 2025

- Developed Python software to control a robotic arm stage to execute precise movements for semiconductor manufacturing
- Implemented quaternion and matrix maths to improve motion accuracy
- Collaborated with a team of 4 engineers, contributing to design, testing, and debugging

**FRC Iron Claw Robotics Team 972 - Programmer & Mechanical Designer** Sep 2017 - May 2019

- Programmed autonomous and teleoperated robot movement in Java, contributing to a **1st-place finish** at the 2019 San Francisco Regionals.
- Designed and fabricated components using Autodesk CAD
- Wired the Power Distribution Panel (PDP), ensuring reliable electrical performance in competition.

**Loaves and Fishes Family Kitchen - Volunteer** Feb 2017 - May 2019

- Maintained community garden, contributing to production of fresh produce for low-income families.
  - Assisted with preparation and meal distribution
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## Education

**ISC2 - Certificate of Cybersecurity - In Process** July 2025 - Present

**Lewis and Clark College - School of Mathematics and Computer Science** Sep 2022 - May 2025

Bachelor of Arts, Computer Science, GPA: 3.8 Magna Cum Laude

Relevant coursework: Algorithms, Data Structures, Computer Graphics, Cybersecurity, Physics

**University of California, Santa Cruz - Department of Astronomy & Astrophysics** Sep 2021 - Jun 2022

**West Valley College/Los Gatos High School - Middle College/Running Start** Sep 2017 - May 2021

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## Technical Proficiencies

- **Programming:** Python, Java, C, HTML, CSS, PHP, SQL
  - **Cybersecurity:** Wireshark, penetration testing, SQL injection mitigation, National Cyber League participant
  - **Graphics & Simulation:** Matrix computations, 3D ray tracing
  - **Data Analysis:** Excel/Sheets automation, ANOVA, large dataset management
  - **Engineering & Fabrication:** Robotics, electrical systems, soldering, welding, 3D CAD modeling
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## Past Projects & Hobbies

- **Scrabble Game (Java)**
- **3D Ray Tracer (C)** - Built ray tracing engine supporting reflections, refractions, and shadows
- **Qwixx Dice Game (Python, Tkinter)** - Developed playable Tkinter-based version with score tracking
- **Image Classifier (Python, TensorFlow)** - Trained CNN to classify dogs vs. cats with high accuracy
- **Light Bending Model (C)** - Simulated gravitational lensing around a supermassive object