

# VICTORIA SUN

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🐙 [github.com/victoriasunshine](https://github.com/victoriasunshine) portfolio : [victoriasun.xyz](https://victoriasun.xyz)

## Education

### University of California, Irvine

*Bachelor of Science in Computer Science*

Sep. 2025 – June 2028

*Irvine, CA*

### Irvine Valley College

*Associates with a focus in Natural Sciences*

Aug. 2023 – May 2025

*Irvine, CA*

## Projects

### Legacy Robotics: Panoramic Rover Mapping System | C++, OpenCV, ROS2, ZED2 - [Github](#) April 2026-Present

- Own the panoramic image stitching pipeline for a legacy rover platform: cylindrical projection warping, SIFT feature detection, and RANSAC-based homography estimation to chain multi-frame image sequences into a single wide-field panorama.
- Designed and implemented a ROS2 (Humble) node that integrates the stitching pipeline into the rover's live camera feed, buffering frames from the ZED2 stereo camera and exposing an on-demand stitch service, replacing the original offline/batch-only workflow.
- Built a post-processing stage for seam and hole correction using connected-component analysis and inpainting to reconstruct clean panorama boundaries after multi-image blending.
- On-hands experience using Git, setting up a team Docker, and working with an NVIDIA-Jetson

### Personal Portfolio Site | [victoriasun.xyz](https://victoriasun.xyz)

January 2026-Present

- Built and deployed a full-stack personal site using Next.js and TypeScript, with Tailwind CSS for styling and Vercel for CI/CD and hosting.
- Integrated Sanity CMS via its API to drive dynamic content (projects, writing) without hardcoding page content, allowing the site to update independent of code deploys.

### Foundation Fix | Python — [Paper](#) — [Github](#)

September 2025-December 2025

- Developed a computer vision-based color calibration system using OpenCV to extract and correct skin tone measurements under varying lighting.
- Implemented color space transformations ( $RGB \rightarrow XYZ \rightarrow CIE\ Lab$ ) and reference-based lighting correction using a Macbeth ColorChecker.
- Authored a full engineering design report documenting requirements, iterations, algorithms, circuitry, and system tradeoffs.

## Experience

### Bay Honors Symposium

November 2025 – Present

*Researcher, Presenter, Author — [Paper](#)*

*Berkeley, CA*

- Performed data analysis on a cosmic ray muon detector experiment (based on the MIT CosmicWatch design), calculating muon flux rates from Arduino-logged detection data; authored the full research paper detailing methodology, results, and theoretical basis, achieving an honorable mention in the Heslet Scholar Award.
- Led the presentation group in constructing the slides, drafting outlines for the presentation, and organizing practice speeches leading up to the conference. Achieved an honorable mention in the Heslet Scholar Award, an award for the best project in the conference, based on abstract and presentation. Honorable mention is given to five groups.

### Irvine Valley College: Mathematics, Engineering, Science Achievement

February 2025 – August 2025

*Physics, Math, CS Tutor*

*Irvine, CA*

- Proctored quizzes for classes of 30 and gave live feedback to students. Quizzes in this class were collaborative and I was permitted to give incremental pushes in the right direction to encourage independent thought.
- Held private office hours in which I helped students review lecture or textbook material, prepare for tests, and taught methods in finding and fixing bugs in code.

## Skills

**Languages/Frameworks:** C/C++, Java, HTML, CSS, JavaScript, Python, TypeScript

**Frameworks/Libraries:** OpenCV, ROS2, Next.js, Tailwind CSS, Sanity CMS **Developer Tools:** VS Code, XCode, R Studio, JetBrains, Git, Github

**Spoken Languages:** English, Chinese (Mandarin)