

# Esmé Puzio

Goleta, California

619-261-6527 | [esmepuzio@ucsb.edu](mailto:esmepuzio@ucsb.edu) | [github.com/epuzio](https://github.com/epuzio) | [linkedin.com/in/esme-puzio](https://linkedin.com/in/esme-puzio)

## Education

### University of California, Santa Barbara

Bachelor of Science (B.S.) in Computer Science, Minor in Art

December 2024

3.74 Cumulative GPA

## Skills and Relevant Coursework

**Technical Skills:** React, React Native, JavaScript, HTML, CSS, SQL, Python, C++, Blender, Adobe Suite (Illustrator, Photoshop, AfterEffects, InDesign), Microsoft Suite (Excel, PowerPoint).

**Relevant Coursework:** Mobile Application Development, Databases, Computer Graphics, Human-Computer Interaction (HCI), Artificial Intelligence (AI), Machine Learning (ML).

## Projects

### CoilCAM-js [[GitHub](#)]

April 2024 - March 2025

- Worked with Ph.D candidate Sam Bourgault through the Media Arts and Technology department to convert Rhino Grasshopper plug-in to open source JavaScript library.
- Redesigned web interface to let users modify, visualize and save 3D printer slicer toolpaths using coilCAM-js functions ([coilCAM-js](#)) through codemirror.
- Transitioned toolpath visualizer from WebGL to Three.js, and added JavaScript functionality to let users upload and modify files using localStorage.
- Added coilCAM-js functionality to Dynamic Toolchains, an open-source node-based development framework created by the Machine Agency lab at the University of Washington.
- Wrote Hugo documentation for users to view and edit toolpaths in-browser ([coilCAM-docs](#)).

### ISPA [[GitHub](#)]

February 2025

- Full-stack development project using React, Three.js, Next.js and PostgreSQL to display album reviews based on user data obtained from Spotify API.

### IrisGAN [[GitHub](#)]

March 2024

- Built Generative Adversarial Network (GAN) AI to create images from video input using Python/TensorFlow. Processed images with OpenCV cascade classifier before training GAN.

### RaeTracer [[GitHub](#)]

November 2023

- Built a 3D graphics render using C++. Raytracer implemented Blinn-Phong shading, reflections and texture mapping for simple geometric objects.

### Happy Cows [[GitHub](#)]

May 2023

- Implemented frontend and backend features for an educational game within a team of six using Java and JavaScript. Game used by 100+ students in Environmental Chemistry course.
- Worked with legacy codebase, automated testing (GitHub Actions, Maven, Stryker), GitHub version control. Conducted standup meetings using an Agile framework.

## Professional Experience

### Undergraduate Research Assistant January 2024 - present

Expressive Computation Lab, University of California, Santa Barbara

- Worked with UCSB Media Arts and Technology graduate program to develop web interfaces for 3D printing fabrication library.

### Orientation Staff Advisor March - August 2021, 2022, 2023

Orientation Programs & Parent Services, University of California, Santa Barbara

- Led tours, workshops, academic advising and panel discussions for 3,000 incoming freshmen per summer. In 2023, managed reservations for parents and students using internal system.