esromerog.com | esromerog@gmail.com | github.com/esromerog | immortaicarus.itch.io

esteban romero

Exploring how systems of play and interaction connect us to new worlds.

Education

BS in Biomedical Engineering

August 2020 - June 2024, Tecnológico de Monterrey

Graduated with High Honors – 4.0 GPA & Top 5% of Class

MFA in Game Design

September 2025 – May 2027 (Ongoing), New York University

Skills

Game Development & Interactive Systems

Unity (C#) | Creative computing with p5.js and Processing | Biofeedback-driven games

Software Development

JavaScript | TypeScript | React | Express (KeystoneJS) | Version control with Git | Linux-based deployment

Machine Learning & AI

Classification, segmentation, and regression in Python | Multimodal data processing (EEG, PPG, audio, vision) for real-time feedback | Agentic AI systems using LangGraph (tool use, state, memory)

Research Skills

Physiological signal processing | Experimental design & data collection | Electrical and mechanical engineering for biosensing devices and microcontrollers.

Publications, Conferences, and Awards

You: Quantified | Conference Speaker

June 2024, 5th International Mobile Brain / Imaging Conference in Piran, Slovenia [Link]

Wearable Biosensor Technologies in Education | Publication

April 2024, Sensors Journal [Link]

A Thousand Word Speller | BR4IN.io Hackathon

April 2023, Virtual BR4IN.io Hackathon 2nd Place in the Programming & Arts Category [Link]

Experience

MindHive & YouQuantified | Research Assistant

July 2023 – Present, New York University (Project Website)

- Led the development and design of the YouQuantified app, a web-based application aimed at connecting real-time streams of multimodal physiological data to code-based visuals. This project is being used in high schools and middle schools in Boston and New York City.
- Designed and developed a context-aware and platform-specific tool for users to create interactive visuals within the platform (GitHub).
- Helped in the design and implementation of data analysis and project planning tools for MindHive, a platform being used by over 500 students to plan, build, and conduct cognitive science studies.

Harvey Surgical | Developer

January 2024 - June 2024, Tecnológico de Monterrey, Guadalajara

- Co-developed a heuristic algorithm to optimize neurosurgical routes for tumor extraction and biopsies by implementing deep-learning based segmentation models from MRI and CT images in PyTorch. (GitHub).

wavesense Student Club | Vice-President and Co-Founder

January 2022 – June 2023, Tecnológico de Monterrey, Guadalajara

- Led a 30+ member student club dedicated to neuroscience workshops, science outreach, and research.
- Worked on biofeedback-based games and installations for events and hackathons.

NT Lab | Research Affiliate

March 2022 - June 2023, Tecnológico de Monterrey, Guadalajara

- Assisted in conducting research on motor rehabilitation treatments using a neuroprosthesis.

BRAIN Tec | Research Affiliate

August 2022 - June 2023, Tecnológico de Monterrey, Monterrey

- Helped in developing software for the real-time data collection, recording, and preprocessing of a brain-to-brain synchrony study in education.
- Wrote and published a review on the use of Wearable Devices in Education.

Mynd Music | Creative Lead

September 2022 - January 2023, Tecnológico de Monterrey & Laboratorio de Arte AC

- Designed and programmed a Unity-based VR experience with real-time auditory feedback corresponding obtained from correlated users' affective states. This project was presented and demoed at the incMTY 2022 festival. (Demo & Paper)