

Helen Zegarra

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Creative Technologist | Human–AI Experiences & UX Innovation

Multidisciplinary Creative Technologist and AI Experience Engineer with a proven track record designing, engineering, and prototyping immersive human–AI experiences. Adept at bridging design thinking, advanced software prototyping, and creative coding to develop high-impact product experiences for global brands. Expert in translating non-deterministic AI capabilities into predictable, user-centric interfaces. Currently pursuing an M.S. in Computer Information Sciences, specializing in AI and Software Architecture.

TECHNICAL SKILLS

- Programming Languages: Python, FastAPI, Flask, JavaScript, TypeScript, C++, HTML5, CSS3.
- Libraries & Frameworks: React.js, Next.js, Node.js, Express, RESTful APIs, State-Machine Logic.
- AI & Emerging Tech: Generative AI, Large Language Models (LLMs), RAG Architectures, Vector Embeddings, GANs.
- Creative Coding & XR: Three.js, GSAP, p5.js, WebXR, AR/VR/MR Environments.
- Design & UX/UI: Figma, Adobe Creative Suite, Design Systems, Rapid Prototyping.
- Hardware & Automation: Microcontrollers, IoT, Sensors, Industrial Automation, Embedded Systems.
- Methodologies: Agile/Scrum, Cross-Functional Teamwork, Innovation Strategy.

EXPERIENCE

Creative Technologist Project Zentric AI | September 2025 – Present

- Architected and coded functional workflow prototypes using Python, React.js, and advanced state-machine logic to build a responsive, low-latency conversational AI environment.
- Optimized vector-embedding strategies and context window parameters, actively demonstrating how to turn non-deterministic AI capabilities into predictable, user-centric product experiences.
- Engineered seamless state management to bridge the gap between complex backend AI pipelines and highly interactive user interfaces.

Associate Creative Technologist

Momentum Worldwide – New York, NY | Dec 2021 – June 2025

- Led end-to-end prototyping for over 25 interactive experiences across web, mobile, and physical installations for premier global brands including Coca-Cola, Verizon, American Express, Mattel, and Chevron.
- Engineered and deployed highly engaging AI-powered experiential marketing activations, including the Coca-Cola Coke Studio AI Tour and the Barbie StreamHouse interactive installation.
- Developed cross-platform prototypes utilizing React.js, JavaScript, Python, WebXR, and advanced creative coding frameworks.
- Researched and documented emerging applications of Generative AI, AR/VR, and multimodal UX, presenting strategic frameworks to internal executives to steer agency innovation strategy.
- Boosted client engagement metrics by 25–30%, directly accelerating project approvals and shaping final production visions.

Creative Technologist Resident

The GIANT ROOM – New York, NY | Aug 2021 – Dec 2021

- Designed and prototyped interactive STEAM educational kits integrating digital fabrication, creative coding, robotics, and game development, yielding a 20% increase in student participation.

- Created comprehensive educational content focused on computer science, circuits, and digital fabrication, leading to a 15% improvement in student project completion metrics.
- Conducted rapid play-testing sessions and iterative UI updates based on user observation to maximize educational efficacy and digital accessibility.

Applications Engineer / Solutions Engineer

Precision – Arequipa, Peru | Nov 2018 – Aug 2019

- Designed complex automation and electrical instrumentation hardware solutions for large-scale mining and industrial sectors.
- Managed cross-functional teams executing industrial automation pipelines, increasing project output by 40%.
- Analyzed and implemented electrical instrumentation architectures across manufacturing and water treatment industries, expanding the regional active client portfolio by 30%.

EDUCATION

Master's Degree – Computer Information Sciences

Harrisburg University of Science and Technology, Harrisburg, PA

- Current Student

Master's Degree - Interactive Telecommunications Program

New York University, New York, NY

- Thesis Project: Living Heritage /Creative Technologist -Augmented Reality Development

Bachelor of Engineering (B.E.) - Electronics and Telecommunications

Universidad Catolica San Pablo, Arequipa

- Graduated in the Top Third of class.
- Leadership & Engagement:
 - Chairman, IEEE Student Branch (2012).
 - IEEE TISP Champion (2012-2016), promoting STEM education across Latin America.
 - Executive Committee Chair, INTERCON 2014 International Conference.
- Thesis: Proposed IEEE 802.11 protocol extension for WLAN coverage expansion using relay nodes.

LICENSES & CERTIFICATIONS

Scrum and Agile Methodologies (2021)

Pontifical Catholic University of Peru

Industrial Networks and Communications Protocols (2015)

TECSUP Peru

HONORS & AWARDS

Tisch School of the Arts Scholarship Recipient (2019)

New York University

IEEE Larry K. Wilson Award 2015, Outstanding Student Volunteer from Latin America, and the Caribbean (2015)

IEEE (Institute of Electrical and Electronics Engineers.)