Emmanuel Corona

emmanuel.a.corona@stanford.edu | 210-974-8084 | LinkedIn | Website | Google Scholar

XR UX researcher with **two IEEE publications**, **two experiences shipped to the Meta Quest Store**, and four years embedded in applied research settings (2022–2026) on emerging XR devices. Leads mixed-methods studies end to end, from generative research to instrumented field deployments, with a human-factors edge in **attentional demands and cognitive load**, building the 0→1 prototypes and study instrumentation behind the research.

EDUCATION

Stanford University Palo Alto, CA
B.S. – Symbolic Systems, Human-Computer Interaction Concentration (cognitive science + computer science) Jun 2026
Focus: Cognitive impact of AR/VR, attentional demands, human performance, biofeedback systems, multimodal HCI

Skills
Research Methods: Needfinding · Contextual Inquiry · Ethnographic Methods · 1:1 Interviews · Diary Studies · Usability Testing · Unmoderated Studies · Surveys · Field Studies · Log Analysis
Analysis & Instrumentation: Quantitative & Statistical Analysis (Python) · Firebase · Google Analytics (GA4) · Supabase · Lab Streaming Layer (LSL) · EmotiBit biofeedback
Prototyping: Figma · Blender · Unity · C# · OpenXR

PUBLICATIONS

*AMMA: Adaptive Multimodal Assistants Through Automated State Tracking (**Conference Paper**)* IEEE VR 2024
*Stanford MRI Simulator: Interactive VR Training for Pediatric Patients (**Workshop Abstract**)* IEEE VRW 2024

RESEARCH EXPERIENCE

Stanford Virtual Human Interaction Lab (VHIL) | *Researcher* Jan 2024 – Present
• Engineered the **Unity/C# apparatus and behavioral-logging pipeline** behind a PhD-led **16-condition consumer-choice VR study**, capturing complete per-trial interaction and in-VR survey data; also designed **14 VR scenes** for a second study on misinformation (Continued Influence Effect)
• Launched **Virtual Becomes Reality** on the Meta Quest Store, bringing 20 years of VHIL research to consumers by porting it from PC-VR to standalone **Android-based Quest hardware**.

CogLoad, Stanford Human Perception Lab | *Founding Researcher* Jan 2026 – Present
• Architected a Beat Saber telemetry plugin (C#) time-synced with **Emotibit physiology (EDA, PPG, HR)** to separate cognitive from physical load, validating the instrument in a first pilot that surfaced **significant task-demand-to-cardiovascular correlations ($r \approx 0.42$ to 0.46, $p < .05$).**
• Defined a prioritized **research roadmap** aligned with the project's grant goals, scoping each phase's design, instrumentation, and analysis along a funded path from pilot to a controlled A/B study (protocol designed) and a consumer-wearable extension via **Fitbit and the Google Health API**.

Resonate - Social Music Platform | *UX Researcher* Mar 2025 – Jun 2025
• Scoped and led the team's full mixed-methods research lifecycle, as measured by three completed study phases: a generative phase using **ethnographic methods** (1:1 interviews and diary studies, n=9), moderated **usability testing** (n=6), and a **12-day instrumented field study (n=74)** on Firebase and Google Analytics.
• Isolated **onboarding friction as the platform's primary churn driver**, surfacing a **67.2% first-visit abandonment rate** by triangulating funnel and retention **quantitative analysis** of Firebase/GA4 logs with unmoderated think-aloud sessions (n=9) and **content analysis of 36 user comments**; partnered with designers, product managers, and engineers to land **3 prioritized design recommendations**, presented to Google's Director of UX Research for Material Design.

Mind Compass | *Co-Founder* Dec 2023 – Mar 2025
• Drove a **mixed-reality emotional-regulation app** for children from course prototype to **incubator backing and an acquisition offer** from a global palliative-care provider, by directing a four-person team across design and engineering and grounding each iteration in **6 needfinding interviews, empathy mapping, and 3 experience prototypes** with heuristic evaluation.

Stanford University School of Medicine (IMMERS Lab) | *XR Research Assistant* Jun 2023 – Aug 2023
• Generated the clinical evidence that moved the **Mixed Reality MRI Simulator** beyond standard care, designing and conducting a randomized crossover pilot (n=14) with **Stanford Chariot Program** clinicians that showed **statistically significant gains in patient engagement and scan-preparedness**.

Stanford Human-Computer Interaction Group | *XR Research Assistant* Jun 2022 – Sep 2022
• Quantified the value of adaptive AR guidance by building the evaluation and logging infrastructure for a **controlled study (n=13)** of AMMA, instrumenting cognitive load via **NASA-TLX**; the system drove **approximately 22% faster task completion ($p < .001$)** and fewer manual modality switches versus baseline.

LEADERSHIP

Stanford XR | *Co-President* Jun 2024 – Present
• Scaled the annual **Immerse The Bay hackathon from 125 to 217+ verified participants** and **95+ XR prototypes**, by chairing a cross-functional organization spanning MIT and Harvard and negotiating **$30,000+ in sponsorships** from **Meta, Snapchat, and ByteDance**.

HONORS

Y Combinator Mentra Live Hackathon: two track prizes (Best Use of Roboflow, Best Use of ElevenLabs) for **real-time AI on smart glasses** (AceSense) · **MIT Reality Hack 2025**: Top 10 Finalist, Research Lead (Nudge Pet) · **Stanford CS147 Grand Prize** and Most Novel, 40+ teams (Mind Compass)