# SAMUEL SHIELDS

# GAME DESIGN AND RESEARCH

Unity, Genetic Algorithms, Behavior Trees, Parametric Design Role: Project Lead, Systems Design FL '21 PROTOTYPE Number of Contributors: 7

Nominated - Best Artifact - Artificial Intelligence in Interactive Digital Entertainment 2022

• Automatic Game Designer (AGD) capable of designing 2D fighting games without human input. Characters, levels, moves, and physics characteristics are selected through a genetic algorithm that is evaluated using behavior-tree driven AI agents and heuristics for game balance.

SP '22

UX EVAL

SU '22

PUBLICATION

#### Soothing.Systems

Node, Express, P5.js, Mediapipe.js, Tone.js FL '23

FL '22

V2 SCOPING

SU '23

V2 DEVELOP

Role: Project Lead, Systems Design	SP '22	FL '22	SP '23	SU '23	FL '23
Number of Contributors, 7	PROTOTYPE	RESEARCH	ENGINE DEV	EXPERT EVAL	V1 DEVELOP

Winner - Tech for Social Good - CITRIS and the Banatao Institute 2023

 Proof of concept research system focusing on embodied-cognition interactions to treat symptomatic PTSD through trauma-informed game design approaches. Currently in development with the University of Minnesota Mind-Body Truama Lab and Justice Resource Institute.

#### Academical

Role: Systems Designer

Unity, Stable Diffusion, Step, ChatGPT

Winner - National Science Foundation RETTL Grant - Innovating Online Ethics Training Using a **Dynamic Narrative Learning Environment - 2022** 

 Visual novel game with a generative AI art and dynamic dialogue system with background social simulation that teaches Responsible Conduct of Research (RCR) to students by presenting them with playable ethical dilemmas while emphasizing user autonomy, relatedness, and competence.

#### ENTRUST

Role: Producer

P5.js, React.js, Google App Engine

Winner - Ilene B. Harris Legacy Fund - Validity Evidence for ENTRUST, an Innovative Assessment Platform for Entrustable Professional Activities (EPAs) in Graduate Medical Education - 2022 Simulation game developed in collaboration with Stanford surgery department targeting the evaluation and training of surgical tasks conventionally administered via traditional test-taking strategies.

# PROFESSIONAL EXPERIENCE

# **Researcher, Teaching Assistant**

Alternative Learning Technologies and Games Lab, UCSC

• Design, build, and evaluate game engines and their functionality as they relate to learning and therapeutic benefits, then write and present work in conferences, journals, and in curriculum.

- Act as director, producer, or consulting engineer for rotating group of ~20 student contributors across five Serious game development projects.
- Teach studio-focused classes in the Professional Games and Playable Media department, emphasizing teamwork and sustainable SDLC practices to help students meet their goals.

 Playtest student work and host demos for lab work to create feedback loop for game developers in the ALT Games Lab ecosystem.

# Sr. Technical Product Manager

#### Automated Data Processing (ADP)

• Curated backlog for identity and access management features for a metadata-driven HR platform by prioritizing stakeholder requirements, collaboratively designing features, and executing with 10+ resources in design, engineering, and operations.

 Created internal tools platform for customer support, allowing them to onboard and manage user access through growth phase of ~100,000 user accounts across 10 B2B clients.

 Designed a generic implementation of client-credentials OAuth flows to allow other Lifion product teams to rapidly integrate external resources or secure internal resources using configuration only.

# THE GIST

Technical game and systems designer with expertise in game AI and procedural content generation that uses his producer skillset to ensure features are deployed on time and according to stakeholder requirements.

Team player with a strong record of both leading and contributing to game development. Enjoys Action-Adventure, RPG and simulation games. When not gaming, is likely out climbing, skateboarding, or enjoying museums with family.

## PORTFOLIO & CV

https://smshields.com

# CONTACT

samuel.m.shields@gmail.com (702) 326 - 9848 San Mateo, CA

### **SKILLS**

Game AI - Agents Game AI - Asset Production Unity/C# Node/Javascript Arduino Production Serious Game Design **Project Management** Public Speaking Academic Writing/Publishing Web Development

### **EDUCATION**

University of California, Santa Cruz **Computational Media** Ph.D. - Expected June 2025 M.S. - June 2023

Washington University in St. Louis **Computer Science**, **Cognitive Science** B.S. - June 2015