

Experience

Founder AEIOUY Computing Media and Entertainment Hollister, CA — Ongoing
Focus on applied AI/ML research in complex domains, including collaborations with major research groups, and providing technical architecture design for robust backend systems.

Senior Software Engineer, Trustero, Palo Alto, CA/Remote - 2022-2023

I developed numerous third-party integrations in short timeframes, which directly and quickly increased a key business KPI. I also provided feedback on architectural changes, leading to the design and implementation of a generic OAuth system in Go that enabled high-value integrations.

Software Engineer, Arborbridge, Santa Monica, CA — 2014-2015

I developed the company's internal platform using Python/Django and JavaScript, which efficiently connected tutors and administrators and enhanced the quality of communication and tutoring. The application was hosted on Amazon/Heroku. I also mentored and directed junior developers on the project.

Lead Developer, Ratchet Studio; Sunnyvale, CA — 2012-2013

I led the design and development of an iOS-based, 2D city-building multiplayer game. I was responsible for picking the technologies that would best suit the project's requirements, and I personally developed the core game logic, AI, and UI. In this role, I also mentored and directed junior developers in game and mobile development.

Founder, LinguaEarth; Hollister, CA — 2011-2013

I designed and developed iOS-based foreign language learning games. I coordinated the activities of third-party programmers, graphic artists, and external professionals to successfully bring the games to market.

Co-Founder, IPBA; Seoul, South Korea; CA — 2011-2013

I developed a unique web-based game and marketing platform that seamlessly combined live-streamed baseball games, real-time interactive gaming, and social commerce.

Research Assistant, UCSC; Santa Cruz, CA — 2005-2011

My research focused on two key areas: techniques for video game development to enhance foreign language acquisition and the use of Artificial Intelligence for computational humor creation with the creation of the ACME system.

Technical Skills

AI/ML, AR, AWS, Android, Azure, C/C++, CI/CD, Django, Docker, Full Stack, GCP, Game Development, Git, Go, HTML/CSS, iOS, Java, JavaScript/Typescript, Kotlin, LLM, Linux, MongoDB, MySQL, Node, Objective-C, Oracle SQL, PHP, Perl, PostgreSQL, Python, REST API, SQL, Swift, Unity, Unix, VR, VueJS

Education

University of California Santa Cruz, Santa Cruz, CA

Doctoral studies, Computer Science, incomplete

Research focus: Game based learning, Humor and AI Skills

University of California Santa Cruz, Santa Cruz, CA — 2009

Master of Science, Computer Science

Master Degree project: ACME - Using AI to create interactive cartoon situations.

California Polytechnic State University, San Luis Obispo, CA — 2002

Bachelor of Science, Computer Science

Selected projects

- Narrator (WIP): A system that integrates an LLM with game engines to extend human narrative design. The goal is to create a more robust player experience while maintaining the narrative designer's tone and flow.
- Hive Mechanic: Developed a tool that lets anyone create stories and games for a specific place. This tool has been used by organizations like the DC Public Libraries and the DC Office of Planning.
- Rube Goldberg Generator: A procedural generator that creates Rube Goldberg machines based on comic strip designs.
- SokoSports: A JavaScript baseball glove configurator with integrated online shopping tools.
- Tutordock: A web-based tutor administration platform built with KnockoutJS/JavaScript and a Django Python backend.
- LinguaQuiz: An iOS quiz game designed to help with Spanish vocabulary learning.
- Word Circus Mandarin: An iOS game for helping with Mandarin language learning.
- IPBA: A web-based, real-time interactive sports game that integrates with streaming video and includes social commerce features..
- ACME: Developed an author-driven scenario generator that uses AI to create humorous, procedurally generated narratives based on a player's interactive object placement.

Awards

- Best Fan Experience Future of Sports Hackathon 2017
 - Awarded 3rd place in UC Santa Cruz Business Plan competition for LinguaEarth 2009
 - DreamIT Ventures Program and DFJ-Cisco Global Business Plan Competition for IPBA 2010
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Publications

Sherol Chen, Carter Morgan, David Olsen, et al. *Towards an Authorial Leverage Evaluation Framework for Expressive Benefits of Deep Generative Models in Story Writing*, Workshop on Intelligent and Interactive Writing Assistants@CHI 2023

David Olsen, Mark Nelson. *The narrative logic of Rube Goldberg machines*, International Conference on Interactive Digital Storytelling 2017

David Olsen, Michael Matias. *Beep! Beep! Boom!: Towards a Planning Model of Coyote and Road Runner Cartoons*, Foundations of Digital Games 2009
