Joshua Lum

(702) 793-5286 | jalum@usc.edu | www.linkedin.com/in/josh-lum | https://github.com/Plum1234

EDUCATION

University of Southern California, Viterbi School of Engineering & Marshall School of Business May 2026
Bachelor of Science, Computer Science and Business Administration GPA: 3.72
Relevant Coursework: Artificial Intelligence: Principles and Foundations, Algorithms and Theory of Computing, Data Structures and Object-Oriented Design, Discrete Methods in Computer Science, Linear Algebra & Differential Equations
Leadership & Involvement: Head Peer Academic Leader, Chinese American Student Association (President)
Awards & Honors: 8VC Engineering Fellow (2026), Dean's List (All Semesters), Magna Cum Laude

EXPERIENCE

Campus – Series B (8VC/Founder's Fund portfolio) New York, NY
Software Engineering Intern (8VC Engineering Fellow) May 2026–August 2026

- 1 of 30 selected 8VC Engineering Fellows, building AI-powered features at Campus to enhance student learning.
- Drove student engagement by shipping a DM-native AI assistant ("Sam") across 4 services (Go backend, React frontend, Go WebSocket server, Python/LangChain), letting Sam reply and proactively outreach in student DMs.
- Improved AI response quality and reliability by updating the model's metadata on assignment information, adding file upload support, and implementing tracing and logs through Datadog.

Uthana – Seed (A16Z portfolio) Los Angeles, CA
Product & Engineering Intern May 2025–August 2025

- Worked with product and engineering teams to iterate features and launch a live generative AI animation demo at SIGGRAPH 2025, viewed by 2,000+ game developers, ML/AI researchers, and industry stakeholders.
- Built an automated Python workflow that processed and ranked 10K+ user motion prompts using frequency (demand) and embedding-based cosine distance (novelty/coverage) to generate a monthly top-150 MoCap prompt batch and improve training data quality for Uthana's generative motion model
- Reported on 10+ companies and technologies in AI animation to shape product features and company partnerships.

Tamagotchi Lab, USC Viterbi School of Engineering Los Angeles, CA
Undergraduate Student Researcher May 2024–May 2026

- Conducted ML/NLP interpretability research on how large language models (e.g., GPT-2) encode and use syntactic and semantic information, with applications to fairness-critical decision systems.
- Co-authored "Causal Interventions on Causal Paths: Mapping GPT-2's Reasoning From Syntax to Semantics," a paper studying attention mechanisms in transformer models, accepted to CaLM at NeurIPS 2024.
- Analyzed 30K+ sentence pairs across 10 syntactic and 5 semantic templates, using activation patching and ablation to identify 5+ GPT-2 layers driving causal reasoning across 144 attention heads.
- Co-authored "Evaluating Large Language Models for Fair and Reliable Organ Allocation," a paper analyzing fairness and bias in LLM-based kidney allocation decisions using real OPTN data

PROJECTS

The Intern (Proactive AI Coding Agent) | *Replit, Python, Claude Agent SDK, Slack API, Linear, GitHub API*

- Built an always-on AI agent that lives in Slack, triages Linear tickets, writes code on feature branches, opens draft GitHub PRs for human review, and demos on Replit using a multi-agent architecture on the Claude Agent SDK
- Set up continuous preview deployments on Replit via a GitHub Actions pipeline that auto-deploys every agent-opened PR to a live *.replit.app URL, then comments it back on the PR to give reviewers a one-click demo.
- Integrated Slack Socket Mode, Linear and GitHub MCP servers, GitHub App token minting, and Perseus semantic code search to give specialist subagents scoped, repo-limited tool access and guardrails for code safety.

3D Interactive AI Companion | *C#, OpenAI API, Microsoft Cognitive Services, Unity, Blender*

- Developed a 3D interactive AI companion in Unity, leveraging Blender for 3D modeling and animations, and integrating Microsoft Cognitive Services for speech recognition, synthesis, and return audio
- Used C# and OpenAI API to power dynamic conversational AI and syncing character animations and speech

SKILLS AND INTERESTS

Skills: Python, PyTorch , C++, C#, Go, Java, Javascript, React, Node.js, Typescript, SQL, Git
Interests: Music, Hiking, Pickleball, Spikeball, Snowboarding, Cycling, Gaming