

# Ethan Harianto

[eharianto@stanford.edu](mailto:eharianto@stanford.edu) | [ethanharianto.github.io](https://ethanharianto.github.io) | (347) 475-7671

## Education

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### Stanford University

MS in Computer Science (AI)

Expected June 2026

BS in Computer Science (Systems)

Expected June 2026

**Relevant Coursework:** Deep Learning, Spoken Language Processing, Artificial Intelligence Principles, Design & Analysis of Algorithms, Operating Systems Principles, Hardware Accelerators, Computer Architecture

## Honors & Recognition

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**Pear Prime Engineer** (Vetted for Founding Engineer Roles)

## Experience

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**Junior Software Developer**, Pantheon Lab

June 2025 – Aug 2025

- Built a distributed inference pipeline in Go handling 1,000+ concurrent requests; implemented rate-limiting to prevent outages during demand spikes.
- Reduced voice-agent latency by 30% (<500ms) via in-memory audio processing (WebRTC), directly improving conversation fluidity for end users.
- Engineered a containerized deployment strategy using Docker, ensuring 100% environment parity between development and production for distributed microservices.

**Develop for Good**, Engineering Lead

May 2025 – July 2025

- Engineered member dashboards for 50+ global chapters, centralizing event data and reducing weekly administrative workload by 8 hours per chapter.

**Research Assistant**, Stanford PinCS Lab

Mar 2025 – June 2025

- Developed a Swift-based mobile app leveraging AssemblyAI's API for real-time transcription, designed to aid memory recall for early-stage Alzheimer's patients in a university pilot study.

## Projects

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[Aboard the Icarus](#) | TypeScript, Next.js 14, Google Gemini API

Dec 2025 - Jan 2026

- Built an adventure game with an inference pipeline using a multi-model fallback strategy (Gemini Pro/Flash/Gemma), achieving zero cost through adaptive model routing.

[LyricNet: Multimodal Music Emotion Recognition](#) | Python, Pytorch, Transformers

Oct 2025 - Dec 2025

- Researched and implemented a multimodal deep learning framework fusing DistilBERT lyric encodings with normalized audio features to predict emotional states.

**Operating Systems Kernel (Pintos)** | C, x86 Assembly

Mar 2025 - June 2025

- Built a multi-threaded OS kernel in C with demand-paged virtual memory, a synchronized write-back buffer cache, and priority scheduling to drastically optimize memory management and disk I/O.

[Reinforcement Learning Game Agent](#)

June 2024

- Developed an AI agent to play the game Coup, implementing a Q-learning algorithm that achieved a >90% win rate against random-action opponents.

[Rock Climbing ML Grading System](#) | Python, PyTorch, YOLOv5

May 2024 - June 2024

- Developed a computer-vision pipeline with representation learning to grade climbing routes, achieving 80% accuracy.

**Slide Social (iOS App)** | Swift, UIKit, Algorithms

June 2023 - Sep 2023

- Architected and launched a full-featured iOS social networking application, designing a scalable backend schema to handle real-time user authentication, concurrent media feeds, and complex social graph relationships.

## Skills

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**Languages:** Go, TypeScript, JavaScript, C++, C, Python, Swift

**Backend & Systems:** Docker, Git, Linux/Unix, WebRTC, Firebase

**Frontend:** Next.js, React, SwiftUI

**Cloud:** AWS, Azure, Google Cloud Platform