Ethan Harianto

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Education

Stanford University Expected June 2026

MS in Computer Science & BS in Electrical Engineering GPA: 3.78/4.0

Relevant Coursework: Design & Analysis of Algorithms, Operating Systems Principles, Computer Organization and Systems, Artificial Intelligence Principles and Techniques, Digital System Design, Digital Systems Architecture

Experience

Junior Software Developer, Pantheon Lab June 2025 – Aug 2025

- Architected a conversational AI pipeline (STT→LLM→TTS→Lip Sync) for a digital assistant, integrating open-source models into a framework built on WebRTC; managed deployment on cloud instances across multiple countries.
- Architected and deployed a secure, globally distributed backend API in Go, implementing rate-limiting and user quotas to ensure high availability and service resilience.
- Launched a self-service developer portal with Next.js that automated API key registration for users, reducing developer onboarding time from hours to minutes.

Engineering Lead, Develop for Good – Website Project for IYNA May 2025 – July 2025

- Devised a zero-cost development and collaboration workflow for the WordPress platform, eliminating server fees and enabling seamless remote teamwork.
- Engineered member dashboards and chapter management tools for 50+ global chapters, centralizing event data and reducing weekly administrative time by an estimated 8 hours.

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.
- Engineered a highly accessible user interface, implementing accessibility features like high-contrast modes, scalable fonts, and single-tap navigation to enhance usability for individuals with cognitive impairments.

Lead Engineer/Co-Founder, Slide Social Dec 2022 – Sep 2023

- Architected and led the end-to-end development of a Swift-based social app, personally building 80% of the codebase from initial Figma design to a successful App Store launch.
- Engineered a proprietary image compression algorithm that reduced cloud storage costs by over 90% while maintaining visual quality, significantly cutting projected operational expenses.
- Implemented a responsive SwiftUI interface with custom animations, enhancing application fluidity and achieving a consistently smooth user experience without stalled frames.

Projects

Digital Audio Player Sep 2024 - Dec 2024

- Designed and implemented a digital audio player in Verilog, creating custom hardware logic for real-time reverse playback and dynamic waveform visualization on a PYNQ-Z2 FPGA.

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 Machine Learning Project May 2024 - June 2024

- Engineered a self-supervised learning algorithm in Python, leveraging PyTorch and the YOLOv5 model on a custom dataset to automatically grade indoor rock climbing routes, achieving 80% accuracy against expert evaluations.

Skills

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

Frameworks & Libraries: Next.js, React, PyTorch, SwiftUI, scikit-learn, Pandas, NumPy

Platforms & Tools: Git, Firebase, NodeJS, Figma, OpenAI API, AssemblyAI, Ollama, Azure STT

Hardware: Verilog, FPGA Programming, Digital Logic Design