

Ting-En (Hera) Chen

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Software engineer specializing in real-time video streaming and browser media technologies. Experienced in WebRTC, WebAssembly, HTML5 video, and observability systems, with a focus on playback performance, low-latency streaming, and cross-platform debugging. Passionate about building reliable streaming infrastructure and media applications.

Work Experience

Software Engineer, IKG Team

Jun 2025 - Present

- Developed and maintained a WebAssembly-based video player distributed as an internal npm package for multiple web applications.
- Integrated WebRTC (WHEP) playback into the existing streaming platform, enabling low-latency live video delivery.
- Implemented video observability features, including stream delay measurement, playback metrics, and Prometheus monitoring for real-time diagnostics.
- Investigated browser-specific playback issues across Chrome, Safari, iOS, and Android using browser developer tools and platform profilers.
- Debugged media pipeline issues including PTS synchronization, SEI timecode parsing, buffering behavior, and memory usage to improve playback stability.
- Worked with Docker, Frigate, MediaMTX, and streaming infrastructure to support development, testing, and deployment of video services.

Network Validation Engineer, Intel Corporation

Sep 2022 - May 2025

- Validated Intel Ethernet adapters including I350, X710, and E810, as well as networking hardware from Broadcom and HPE.
- Built and maintained an iPXE-based provisioning system to automatically deploy Linux and Windows test environments across multiple validation machines.
- Developed Python automation scripts for network adapter validation, regression testing, and system provisioning workflows.
- Designed and developed a full-stack inventory management platform for tracking network adapters, optical transceivers, and fiber cables using React, Express.js, PostgreSQL, and RESTful APIs.
- Collaborated with hardware and software engineers to investigate networking issues, validate firmware and driver behavior, and improve testing efficiency.

Project

[My Wiki](#)

2026 - Present

: [Next.js](#), TypeScript, Python, Tailwind CSS, FastAPI, PostgreSQL

Built a full-stack wiki with Next.js 15 and FastAPI, featuring article CRUD, category navigation, search, and a GitHub-style Markdown editor.

Designed REST APIs with SQLAlchemy 2.0 and Pydantic validation, tested with pytest; deployed on Vercel and Render

[WSPlayer](#)

2026 - Present

: WebRTC, WHIP/WHEP

WSPlayer is a lightweight WebRTC player built for validating WHEP live streaming workflows.

[AIMT](#)

2022 - 2025

: React, [Express.js](#), PostgreSQL, Node.js

AIMT is a full-stack inventory management system developed to manage Ethernet adapters, optical transceivers, and fiber cables used in network validation laboratories. It provides asset tracking, reservation management, and inventory workflows through a React-based web interface with RESTful APIs and a PostgreSQL backend. Built with React, Express.js, PostgreSQL, Docker, and REST APIs.

The iPXE Provisioning System is an automated deployment platform for rapidly provisioning Linux and Windows operating systems across multiple validation machines.

Skill

Programming Languages

C/C++ | Python | TypeScript | JavaScript | Go

Frontend

React | HTML5 | CSS | Vue.js

Backend

Node.js | REST API

Streaming

WebRTC | WHIP/WHEP | HTTP-FLV | MSE | WebCodecs | FFmpeg

Infrastructure

Docker | GitHub | Actions | Prometheus | Grafana

Systems

Linux | Windows | Networking | iPXE

Education

B.S. in Electronic Engineering - National Ilan University

2017 - 2022

Focused on electronic engineering with additional coursework in core computer science subjects. Interested in bridging hardware and software through system-level programming, networking, and multimedia applications.