

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

WSPlayer

2026 - Present

Lightweight WebRTC player for validating WHEP streams.

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

DemoPlayer

2025 - Present

DemoPlayer is a browser-based streaming player designed for debugging and validating live video playback.

AIMT

2022 - 2025

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.

iPXE

2023 - 2025

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.