

ANSTEIN HUYNH

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SUMMARY

Independent builder shipping production AI end-to-end: a live full-stack platform, an orthogonal-rotation adapter method for perceptual image-quality metrics, and a Registry-published ComfyUI node pack.

TECHNICAL SKILLS

Languages | Python (primary), TypeScript, JavaScript, C#, C++, SQL, G-Code

AI & ML | Stable Diffusion (SD 1.5, SDXL, Flux; Full, LoRA, Textual Inversion), Transformers & LLMs, SFT, computer vision (YOLO, AlphaPose, depth mapping), dataset curation & captioning

Perceptual metrics & efficiency | pyiqa / IQA-PyTorch (53 architectures, 103 metric variants, FR & NR), SSIM/PSNR, LPIPS, TOPIQ; OFT/OFTv2 finetuning; int8 ConvRot quantization

Web, infra & data | Next.js (SSR), React, Node.js, REST & GraphQL, headless CMS (WordPress), Tailwind; Linux (Debian), nginx, PM2, Tailscale, OVH VPS, Git; MariaDB/MySQL, SQLite

Agents, tools & 3D | Agent harnesses: OpenClaw, Z-code, DeepSeek Harness; LLM orchestration (GLM/Z.AI, DeepSeek, local), custom CLI tooling (ullmq, comfyq, calendarq), ComfyUI nodes & Registry publishing; PyTorch, Hugging Face; Fusion 360, Blender, CNC milling, laser cutting, 3D printing (FDM/SLA)

PROFESSIONAL EXPERIENCE

Founder & Full-Stack Developer

2026 – Present

QuantumLeek

quantumleek.com — Remote

- Architected and built a full-stack AI content platform solo: Next.js + React + TypeScript frontend, headless WordPress (GraphQL) + MariaDB backend.
- Built a TikTok-style vertical feed with real-time interactions, JWT authentication, and a follow system.
- Integrated the Stripe payment API for one-time donations with a full donor management system.
- Deployed production on a Debian VPS: nginx reverse proxy, PM2 cluster mode, Tailscale, Let's Encrypt SSL.
- Designed a modular, multi-harness provider architecture (6 domain-grouped provider files) enabling per-page dependency injection across agent harnesses.

Founder & Technical Lead

2019 – 2021

Manadrop

Houston, TX

- Architected an end-to-end digital manufacturing workflow from 3D model design to physical production; sourced materials and machines and ran inventory and production scheduling.
- Designed functional parts and prototypes in Fusion 360 and Blender, turning designs into manufacturing-ready G-code via toolpaths, cut simulation, and DFM.
- Operated 3-axis CNC mills, laser cutters/engravers, and FDM and resin SLA printers for client projects, handling machine setup and finishing.

PROJECTS & INDEPENDENT RESEARCH

RotaSim — Perceptual Similarity via Orthogonal Rotation Adapters

github.com/AnsteinHuynh/rotasim

- Trains OFTv2 orthogonal-rotation adapters on frozen vision towers (DINOv3 ViT-B/16; a 460.7M-parameter Qwen3.8-27B). Releases 428K–2.32M-parameter checkpoints rather than finetuning the 86M–460.7M-parameter backbones.
- Bradley-Terry 2AFC pipeline over FGResQ, BAPPS, DiffQA and NIGHTS: 0.7533 three-corpus preference mean, 0.7619 full-reference mean. Five self-contained release bundles with validation self-tests report the negative results (run noise, a NIGHTS loss) beside the benchmarks.

ComfyUI-pyiqqa-toolbox — Published Image-Quality Node Pack registry.comfy.org/ansteinhuy/nh/pyiqqa-toolbox

- Published node pack (10 nodes, Registry v0.2.1) wrapping pyiqqa: one generic loader reaches 53 architectures and 103 metric variants (NR scoring, FR comparison) instead of one node per metric.
- int8 ConvRot quantization for Q-ReAlign (per-channel int8 + group-256 Hadamard rotation on weights and activations): 17.5 to 11.55 GiB VRAM at 0.0008 mean score deviation, no ranking flips.
- Release-gated on a 2,263-line, 308-assertion smoke suite that regenerates the public metrics docs from the node catalog.

AI Agent Infrastructure — OpenClaw, Z-code, DeepSeek Harness

- Multi-harness agent infrastructure across OpenClaw, Z-code and DeepSeek Harness: LLM orchestration over multiple providers, persistent memory, and Matrix/web channels.
- Custom CLI tooling (ullmq, comfyyq, calendarq), scheduled cron automation for briefings and check-ins, and media pipelines for download, transcription and vision captioning.

Custom AI Development & LLM Analysis

2022 – 2026

- Trained Stable Diffusion models (SD 1.5, SDXL, Flux) via Full, LoRA and Textual Inversion; built a token analyzer for cosine similarity and a custom LR scheduler for training stability.
- Automated training-data pipeline: video frame extraction, face-detection cropping, BLIP captioning, manual quality review.
- Analyzed LLM inference parameters (temperature, top-p, min-p) and built a tool measuring first-token probability distributions across thousands of prompts.

Computer Vision, 3D & Manufacturing

- YOLO classification/labelling pipelines for SFT datasets; AlphaPose with a calibrated multi-camera rig to extract 3D skeletal data and export rigged FBX animation.
- DepthAnythingV2 depth maps plus custom Python and C# scripts to turn 2D references into 3D point clouds and Unity-ready meshes; working formats STL, OBJ, FBX and STEP.
- Self-playing Mahjong AI in C++ with a Python training loop: a custom transformer handling imperfect information (discard history, own hand, visible melds) to predict discards and bets.

EDUCATION

Bachelor of Science, Double Degree in Computer Science and Mathematics

2022

[University of Houston](#)

Houston, TX · GPA 3.436

Bachelor of Business Administration, Major in Supply Chain Management

2017

[University of Houston](#)

Houston, TX · GPA 3.53

ADDITIONAL EXPERIENCE & HOBBIES

- **AI Game Development:** built a complete Unity3D personal game project — C# game mechanics, 3D environment design, and a trailer.
- **Custom Software Tools:** continuous development of utilities and modifications for AI workflows (ComfyUI/A1111 custom nodes, scripts).
- **3D Modeling & Printing:** hobbyist design and printing of complex 3D models in STL, OBJ, FBX, and STEP.