

Bryan Hu

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OPEN SOURCE CONTRIBUTIONS

- **VC Assist** — *CEO*
Student-run non-profit enhancing digital educational infrastructure at Valley Christian Schools. Built and maintained the full-stack platform (frontend, backend, web scrapers); later led a full frontend rewrite to improve performance and UX.
- **VCSD Club** — *Founder*
Founded the Valley Christian HS Software Development Club from scratch. Designed the club website, authored curriculum, and shipped restlock-holmes — an interactive game teaching REST APIs to beginners.
- **FRC Team 3256** — *Programmer*
Robot programming for 2024–2025 seasons: elevator subsystem, 3D simulation for driver practice, anti-tip logic, controller mapping, structured logging, and a competition scouting app built with Tauri 2.0.

PROJECTS

- **Quillium** *SvelteKit* — *CodeMirror 6* — *Tauri* — *SQLite*
Non-linear prose editor with infinitely nestable branching revisions; inline AI annotations (OpenAI/Anthropic/Google); offline-first, SQLite-backed
- **45** *Next.js* — *TensorFlow* — *Supabase* — *PWA*
Gamified workout app; led 4 engineers. TensorFlow pose-detection for exercise tracking, PWA for cross-platform access
- **billion** *TypeScript* — 3 ★ — *3rd Place CAC 2025*
AI-curated video feed app (3rd Place, Congressional App Challenge 2025); built video pipeline and web scraping layer
- **FADAIG** *Python* — *Arduino* — 7 ★
USB HID bot that physically plays GamePigeon Word Hunt via Arduino Leonardo; trie-based solver + serial bridge
- **LJV** *Svelte* — *WebGL2* — *Tauri* — 2 ★
Real-time Lissajous music visualizer at 60fps; WebGL2 shaders with additive-blending trails, audio-reactive parameters
- **Wuzursched** *SvelteKit* — *Supabase* — *TailwindCSS*
Full-stack schedule sharing/comparison app; solo-built frontend, backend, and Supabase integration in one month
- **Zyma** *Next.js* — *Supabase* — *TailwindCSS*
Client attendance tracker; first version shipped in 12 hours with Supabase auth and a modern design system
- **aioudp** *Python* — *PyPI* — 18 ★
Websockets-inspired async/await UDP library on PyPI with ReadTheDocs docs and full test coverage
- **unmarkd** *Python* — *PyPI* — 16 ★
Extensible HTML-to-Markdown converter; subclass-based plugin API for custom tag handling, BeautifulSoup4 engine
- **pyt2** *Copier* — *GitHub Actions* — 14 ★
Python project template with multi-platform CI, auto-publish to PyPI via Trusted Publishers, and template syncing
- **idae** *Python* — *PyPI* — 11 ★
PEP 723 script runner; auto-creates cached virtual environments per dependency set, published on PyPI

SKILLS

Languages: Python, TypeScript, JavaScript, Rust, Java, C++

Frameworks: React / Next.js, Svelte / SvelteKit, TailwindCSS

Databases: Supabase, PostgreSQL, SQLite

DevOps: Git, Docker, GitHub Actions, Vercel, CI/CD

Automation & Systems: Bash, Zsh, Selenium, Playwright, Scrapy

Spoken Languages: English (Native), Mandarin (Fluent)

MUSIC & PRODUCTION

- **Piano** (9 years) — CM Level 10, State Honors; USOMC Intermediate Baroque — 3rd Place, 2023
- **Trombone** (8 years) — HS Band & Jazz Band — 2nd Place, Folsom Jazz Festival 2025
- **Composer** — Published on Spotify, Apple Music, and MuseScore
- **Camera & Post Production** — Canon C200s, live switching, Final Cut Pro, Logic Pro, Darktable | [instagram.com/icliptheworld](https://www.instagram.com/icliptheworld)

AWARDS

- **USACO Silver** — USA Computing Olympiad, competitive algorithmic programming
- **picoCTF 2026** — **174th / 8,747** — Carnegie Mellon's national cybersecurity CTF covering binary exploitation, reverse engineering, cryptography, and web security
- **FRC Team 3256** (2024–2025) — Creativity Award (Champs), Excellence in Engineering, Innovation in Control, Engineering Inspiration ×2, Judges' Award, Regional Finalists