

Chien-Yin (Dennis) Wang

Ann Arbor, MI • chienyw@umich.edu • (734) 450-2630 • chienyinwang.vercel.app • github.com/denniswanglabs

Education

University of Michigan, Ann Arbor, Michigan · M.S.E., Mechanical Engineering Aug 2026 – May 2028 (expected)
National Tsing Hua University, Hsinchu, Taiwan · B.S., Power Mechanical Engineering Sep 2021 – Jun 2025
GPA: 3.91/4.3 in the final 60 credits, 3.37/4.3 cumulative (4.3 scale). English-speaking TA, Thermal and Fluid Science I.
Coursework (A+ in each): Heat and Mass Transfer, Energy Engineering, Manufacturing Processes, Finite Element Methods
Award: 2024 Summer International Exchange Research Scholarship (one of three undergraduates in the department)

Research Experience

Biomedical Design and Manufacturing Lab, UMich · Research Assistant (Prof. Albert Shih) Sep 2026 – Present

- Extracting individual diamond grains from Keyence VK-X110 laser-scan height maps of a grinding wheel: per-grain base-line detection, a solid-closure rule that adds no unmeasured surface, and STEP export of grain solids for contact simulation.
- Built a browser review tool: adjust each grain's base line, record accept/reject verdicts, drive the CAD bake.

Biomedical Design and Manufacturing Lab, NTHU · Research Assistant (Prof. Albert Shih) Sep 2023 – Nov 2025

- Developed "Sliding Stretch-Bending," a wire-forming process making multi-radius TAVI wires in a single draw, reducing manufacturing time; first-author poster, PRESM 2025 (Chiang Mai).
- Built the control stack: Python control of a Zaber stage with Arduino load-cell force feedback and logging.
- Built a cantilever test rig with laser displacement sensing measuring wire tip stiffness at 0.05 N per gram.

Biomedical Design and Manufacturing Lab, UMich · Visiting Research Assistant Jun 2024 – Aug 2024

- Prototyped a mechanism achieving 80% radial compression of a 14 mm impeller in an expandable pVAD.
- Investigated Nitinol shape-memory actuation via controlled heating; stress-strain analysis of the impeller.

Experience

Luceo Studio, Pingtung, Taiwan · Founder and Producer Apr 2026 – Present

- Built an AI production toolchain: Claude Code agent skills that chain web research and Remotion rendering.
- Shipped 10+ technical explainer and product films; three sold to paying clients.

SHL Medical, Taoyuan, Taiwan · Test Excellence Intern Jan 2025 – Jun 2025

- Built a non-destructive failure-diagnostics framework for autoinjectors from high-speed video of stopper-drug air-compression dynamics, detecting plunger-actuation failures and needle blockages.
- Co-developed a first-principles extended-Bernoulli model of injection time across design and fluid parameters.

KT Medical, Kaohsiung, Taiwan · Development Intern Jul 2023 – Sep 2023

- Extended wire-straightening capability from 0.2 mm to 0.1 mm wires through reduced curvature radii.
- Designed a magnetic oil-filtration system and robotic-arm components that automate wire welding (Inventor).

Projects

Walk Agent – Winner, NVIDIA Agent Hackathon, Taipei · Autonomous web agent on the NVIDIA stack May 2026 – Jun 2026

- Nemotron 3 Super 120B acts inside a NemoClaw sandbox under seccomp and network-policy guardrails; a sandboxed discovery pass logs actions that a host-side performer replays, so untrusted page content never reaches the host.
- Built a 12-target evaluation suite with independent grading; raised task success from about 58% to about 92% and cut mean run time 46%. Selected by NVIDIA judges for "innovation and technical use of NemoClaw."

Filmo, Remote · Agentic launch-film producer, live at filmo.dev Jun 2026 – Present

- Reads a live product page, diagnoses the conversion gap, plans and prices the cut, and gates production on credits.
- Renders 1080p output from a curated scene library on a Railway worker, gated on automated delivery checks.

Delimar, Costa Rica · Website and AI product photography for a seafood processor Jun 2026 – Aug 2026

- Built and shipped the bilingual company website (Next.js, 248 static routes), live at delimarcrc.com.
- AI retouching pipeline: phone photos to 25+ retail-grade 2K packshots live on the product pages; exact-logo QA gate.

Skills

CAD: Inventor (proficient), AutoCAD, CadQuery/STEP, Blender for technical renders
Analysis and Programming: Python (NumPy/SciPy), MATLAB, finite element analysis, heat transfer and thermal-fluids
Instrumentation and Controls: Arduino, Zaber stages, load cells, laser displacement sensors, high-speed video
Software and AI Tooling: TypeScript/React/Next.js, Postgres, Playwright, Remotion; Claude Code agents; NVIDIA NIM, NemoClaw
Languages: English (fluent), Spanish (fluent), Chinese (fluent)