Hanson Wen

Computational Biology, Guinness World Record Holder

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Education

UC Berkeley — Molecular and Cell Biology + Computer Science 2025–2029

- *Activities:* Project Lead at Computational Biology @ Berkeley, iGEM@Berkeley Computational Team Member (De novo protein binder design, transcriptome foundational models), ACE (Association of Chinese Entrepreneurs), AI Entrepreneurs at Berkeley Incubee SP26

Harrow International School Hong Kong 2012–2025

- A-Levels: Math, Further Math, Physics, Biology (A*A*A*A*); SAT: 1570 (790 R/W, 780 M)

Professional Experience

Regeneron Pharmaceuticals — Incoming Computational Biology Intern Summer 2026

- Developing predictive models to optimize clinical trial design and patient cohort stratification, leveraging multi-omic data and personalized biology for targeted drug efficacy

UC Berkeley Sky Computing Lab — Student Researcher Mar 2026–Present

- rLLM hive team. Developing Agent Swarms for Biology. [Repo]

Berkeley RDI — Student Researcher Jan 2026–Present

- Helping build AgentHLE, Humanity's Last Exam for computer use agents; benchmarking agent performance across 63 high-GDP domains from 3D modeling to accounting to education

Stealth Biotech — Co-founder Nov 2025–Present

- Building foundational AI models that leverage multi-modal patient input (transcriptomics, histopathology slides, EHR etc.) to help oncologists better predict treatment risks for cancer patients
- Model training/inference infrastructure, model architecture design

CytoAurora Biotechnology — Research/ML Intern Jun–Aug 2025

- Contributed to CytoAurora's AI-driven computer vision screening pipeline for circulating tumor cell (CTC) detection from liquid biopsies; worked with nano-biological chip imaging data and assisted in training and evaluating cell classification models for automated histopathology/cytopathology analysis

Research & Projects

- **Personal Genome Analysis:** Processed my own genome (131GB WGS data), achieving 88.63% mapping rate; identified 4.99M variants including 471 high-impact mutations across 355 genes; characterized East Asian ancestry (2.08M population-consistent variants); analyzed pharmacogenomic markers (CYP2D6/CYP2C19/CYP2C9) affecting drug metabolism; deployed pipeline on Google Cloud Platform requiring 128GB RAM/1.5TB storage [Repo]
- **CNV Cancer RNA-seq Analysis:** Built reproducible pipeline and web dashboard (CopyKAT, React, FastAPI) to infer and visualize copy number variation patterns from scRNA-seq cancer datasets; separates malignant from normal cells
- **Enso Atlas:** Google MedGemma Impact Challenge Top 10 (Honorable Mention) out of 878 submissions; fully local on-premise pathology AI system for treatment-response prediction; analyzes whole-slide images using TransMIL, Path Foundation, MedSigLIP, and MedGemma for slide-based prediction, evidence visualization/retrieval, and reporting; FastAPI + Next.js + PostgreSQL
- **Arthritis Biomarker Machine Learning** (DOI: 10.33696/Proteomics.4.015): Identified 79 DEGs across spondyloarthritis and rheumatoid arthritis from spatial transcriptomics of 6 synovial biopsies; 93.3% classification accuracy (LGBM); GO enrichment, KEGG pathway, and SHAP interpretation
- **De Novo Protein Binder Design & Validation:** Built RFdiffusion-based pipeline for generating novel protein structures conditioned on active site motifs; validated designs via structural alignment of catalytic residues using PyMOL and binding affinity scoring with AutoDock Vina; developed as part of iGEM computational team

Honors & Awards

- **Guinness World Record** — Fastest scheduled-flight circumnavigation (44h 33m 39s); partnered with disability rights advocate Cham-Kai Yip to promote accessible air travel; featured live on TVB 2024
- **iGEM Gold Medal (Team Lead)** — Led 14-member synthetic biology team to Gold Medal; coordinated wet lab experiments, computational modeling, and human practices components 2022
- **CalHacks 12.0 Regeneron Track Prize Winner** — Won 1st in the Regeneron track at CalHacks 12.0 (USD 5,000) for TrialScope AI, an agent that extracts protocol insights to speed trial design Oct 2025
- **Y Combinator Bio/AI Hackathon Winner** — Won the YC Bio/AI Hackathon with a tri-modal LUAD decision-support system (pathology + RNA + clinical) for treatment sequencing and trial suggestions 2026