

Xinheng Wang

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Location: Kunming, China / Hong Kong | HK Work Visa (TTPS) | Open to Global Remote / Relocation

EDUCATION

University of California, San Diego (UCSD)

La Jolla, CA

B.S. in Mathematics-Computer Science & B.S. in Cognitive Science (ML Specialization)

Sep 2023 – Sep 2025

- **GPA: 3.97 / 4.0 (Magna Cum Laude)** | Provost Honors (All Quarters)
- **Relevant Coursework:** Large Language Models, Deep Learning, Machine Learning Algorithms, Design & Analysis of Algorithms, Advanced Data Structures, Operating Systems, Genetic Algorithms, Software Engineering, Numerical Analysis, Mathematical Statistics.

Mt. San Antonio College

Walnut, CA

A.S. in Science in Mathematics for Transfer (Honors) | **GPA: 4.0 / 4.0**

Jan 2021 – Jun 2023

TECHNICAL SKILLS

Languages: Python, C++, Java, JavaScript, TypeScript, SQL, HTML/CSS, R, MATLAB

Frameworks & Mobile: React Native, Expo, Next.js, React.js, Tailwind CSS, PyTorch, TensorFlow, Keras, Scikit-learn

AI & LLM Tools: LLM Evaluation & Benchmarking, Transformer Architectures, Prompt Engineering, RLHF Data Curation, RAG, OpenCV

Cloud & Developer Tools: Git, Cursor, Linux/Unix, Node.js, Supabase (PostgreSQL, Auth, Storage, Realtime, RLS), Vercel, RESTful APIs, EAS Build, EAS Update, App Store Connect, Google Play Console, Postman

PROFESSIONAL EXPERIENCE

Full-Stack Software Engineer (Contract / Lead Developer)

Oct 2025 – Present

Babytree Surrogacy (MySurro)

Ontario, CA / Remote

- Sole engineer for **MySurro**, a production Expo/React Native app on the **iOS App Store** and **Google Play**, covering surrogate and intended-parent applications, matching, medical records, IVF/OB appointments, claims, and document workflows.
- Built a Next.js/TypeScript Web Admin Portal (Vercel) for agency staff to manage cases, matching, payments, and document transfers across admin, branch-manager, and finance-manager roles.
- Designed PostgreSQL schemas and Row-Level Security policies on Supabase (Auth, Storage, Realtime), plus Next.js REST endpoints for privileged mutations, with role-based access for surrogate, parent, and internal staff.
- Automated iOS/Android release pipelines with EAS Build/Submit, Expo OTA updates, and App Store Connect / Google Play Console, enabling store binaries and JS-only hotfixes without full resubmissions.
- Implemented Supabase Realtime subscriptions so match progress and in-app notifications update on mobile clients as soon as agency staff change data in the admin portal.

AI Model Evaluation Fellow (MOVE Fellow)

Aug 2025 – Sep 2025

Handshake AI (Project Castor / QA Bench)

Remote (San Diego, CA)

- Evaluated static web applications against multi-node interaction rubrics to train frontier LLMs in understanding semantic feature connectivity and software execution correctness.
- Applied multi-tier decision logic (*satisfied, not_satisfied, impossible_to_verify, escalate*) across UI components, verifying complex feature dependencies, event handlers, and data mutations.
- Identified model failure modes—such as unrendered UI components, broken interactions, and missing dependency states—to generate structured benchmark data for web-agent training.
- Conducted evaluation workflows in isolated incognito testing environments via Feather to prevent data cross-over and maintain benchmark evaluation integrity.

Academic Support & Achievement Center Tutor

Jan 2023 – Feb 2023

Mt. San Antonio College

Walnut, CA

- Mentored undergraduate students in Advanced Calculus and Statistical Analysis, translating complex mathematical proofs and algorithms into intuitive concepts to improve student pass rates.

SELECTED PROJECTS

LLM Interpretability & Semantic Surprisal Analysis | Python, PyTorch, Transformers, Seaborn

UCSD (COGS 150)

- Investigated Transformer LLM (GPT-2) sensitivity to world-knowledge violations by designing controlled minimal pairs and computing next-token Surprisal metrics ($-\log_2 p$) via Hugging Face and PyTorch.
- Extracted next-token output logits to demonstrate that semantic violations yield $3\times$ higher surprisal ($M \approx 11.1$ vs. 4.1), drawing computational analogues to the human N400 ERP neurocognitive signal.
- Engineered an automated pipeline to evaluate model prediction errors and visualize surprisal distributions across plausible versus anomalous contexts via Seaborn.

High-Precision Agricultural Computer Vision Classifier | Python, Keras, OpenCV

UCSD (CSE 151A)

- Engineered a Deep Convolutional Neural Network (CNN) to classify 75,000+ agricultural imagery samples with **98.5% test accuracy**, outperforming standard baseline models by 14%.
- Implemented automated image normalization, data augmentation, and geometric feature extraction pipelines using OpenCV; optimized hyperparameters via Keras Tuner to prevent overfitting.