

Da Wei

Undergraduate AI Researcher | World Models & VLN

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Research Profile & Skills

Research interests: Embodied AI • World Models • Vision-and-Language Navigation.
AI & machine learning: machine learning, LLM/VLM inference, and specialized AI-agent design for research workflows.
Programming & tools: Python, Java, R, and LaTeX.
Mathematics & statistics: calculus, linear algebra, vector geometry, probability, and statistics.

Education

University of Washington, Seattle	Seattle, WA
B.S. in Informatics; GPA: 3.73/4.0	Expected 2027 Graduate
The Chinese University of Hong Kong	Hong Kong SAR
Exchange Student	Fall 2026

Research Experience

Multimodal Intelligence Lab, University of Washington	Apr 2026–Present
Undergraduate Research Assistant PI: Zhi-Qi Cheng	Seattle, WA

Human-Aware Vision-Language Navigation	Ongoing Planned 2026 submission Expected second author
- Built a low-cost batch 3D motion-retargeting agent with Kimodo and Virtual Community for new VLN scenes. - Automated avatar retargeting and motion-data preparation, including audit and repair of 300 human-motion samples. - Train and evaluate VLN models via DAgger-based imitation learning; maintain experiment logs and navigation demos.	

Multimodal Speculative Decoding Improvement	Ongoing Planned 2026 submission Expected co-first author
- Surveyed multimodal speculative-decoding and sampling methods to identify limitations in the ViSpec baseline. - Formulated an objective linking visual-compression quality with draft-target model behavior. - Proposed autoencoder-based supervision for the visual adapter to measure and reduce information loss.	

Institute of Automation, Chinese Academy of Sciences	Feb 2026–Present
Undergraduate Research Collaborator Advisor: Ning Yang	Remote

MATH-LWM-AGENT: Efficient Mathematical Tool Agent	First author Submitted to AAAI 2027
- Conceived and led a training-free mathematical agent that predicts tool outcomes before execution. - Designed a residual controller that turns prediction-execution mismatch into state for subsequent reasoning. - Implemented the runtime and integrated Python, SymPy, and verification tools. - Led experiment design, ablations, cost accounting, evidence audits, and manuscript preparation. - With thinking disabled, improved HMMT by 52.13 percentage points. - Improved IMO-AnswerBench by 35.85 percentage points and IMO-ProofBench by 1.22/7. - Residual control reduced model calls per correct by 9.41% and joint inference cost by 10.18%.	

Research Experience (continued)

NUS LinS Lab & RoboScience Lab

Aug 2026–Present

Research Assistant | PI: Lin Shao

Shenzhen, China

WAM RL

Ongoing | Planned 2026 submission | Expected third author

- Lead xArm and xHand data collection, cleaning, and organization for robot-manipulation training.
- Lead real-robot deployment on xArm, xHand, and Franka platforms for WAM experiments.
- Participate in real-robot SFT and RL training for WAM, supporting iterative data-to-deployment cycles.

Open-Source & Leadership

Wordplay

Dec 2025–Jun 2026

Open-Source Project Maintainer

Seattle, WA

- Contribute code and maintain Amy J. Ko's open-source educational programming language and IDE.
- Review accessibility and multilingual typography issues in learner-facing interactions.
- Propose product and usability improvements for the editor and learning workflow.
- Translate findings into scoped implementation tasks and maintainable code changes.

“Xiao Wang Xuezhong” Education Media Channel

Jan 2026–Present

Founder & Content Creator

China / Online

- Founded a social-media channel focused on undergraduate applications and international-student life.
- Grew the WeChat Channels audience to approximately 5,000 followers.
- Explain complex application and university-life topics for a broad student audience.
- Share firsthand insights and experiences from personal research-lab work with audiences.

Industry Experience

Dongguan Yucheng New Material Co., Ltd.

Sep 2025–Jun 2026

Project Lead

Dongguan, China

Multilingual Corporate Website

yuchengmaterial.com/en

- Built and maintain a Chinese-English-Vietnamese website for cross-regional branding.
- Centralized PU, TPU, microfiber, sustainability, production-capacity, and inquiry information.
- Designed page hierarchy, information architecture, and navigation for faster product discovery.
- Maintain the portal as a global business entry point for overseas clients.

ERP Management Prototype

China operations | 100+ users

- Built and iteratively deployed an ERP prototype used by 100+ employees across the company's China operations.
- Digitized the order-to-reconciliation flow across sales, procurement, quality inspection, warehouse dispatch, and finance.
- Converted fragmented practices into standardized system workflows and SOPs with clear ownership and handoffs.
- Used live operations to uncover management gaps and refine controls, improving management visibility and consistency.

Additional

- Scuba diving
- Skiing
- Surfing
- Valid driver's license