

Yan Wang

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Over the past decade, I’ve worked across disciplines. From a math teacher skilled at breaking down complex problems, to a product manager and engineer at Aishang AI, where I built AI-powered education products from the ground up. My work has supported over 2,000 B2B clients and reached millions of learners.

At Carnegie Mellon, I deepened my expertise in AI, HCI, and learning sciences through hands-on machine learning and human-computer interaction projects. I bring a collaborative, inclusive, and detail-oriented mindset that helps cross-functional teams align and deliver. With my interdisciplinary background and leadership experience, I’m excited to contribute to your team and help bring impactful products to life.

Education

Carnegie Mellon University

Fall 2024 - Summer 2025
METALS Program, Human-Computer Interaction, School of Computer Science
GPA: 4.69
Coursework:
11-777 Multimodal Machine Learning,
11-685 Deep Learning
11-601 Machine Learning
18-613 Intro to Computer Systems
05-617 Design of AI Products
05-660 Interaction Design for HCI
05-680 HCI Independent Study
05-840 Tools for Online Learning
05-738 Evidence-Based Educational Design
05-823 E-Learning Principles
05-681 METALS Capstone

Hebei University of Economics and Business

Fall 2011 - Summer 2015
Bachelor of Arts

Skills

Programming

Python, C++, HTML/CSS/JS, PyTorch, TensorFlow, Deep Learning, Multimodal ML, TypeScript, Node.js, React, Express, Tailwind, Vite, SQL/NoSQL, MySQL, AWS, APIs, Git, GitHub, Jupiter Notes, Vercel, Render, Railway, AWS, W&B, SQLite, LLM Integration

Research

User Research, Data Analytics(quality & quantity), Tableau, Interview, Survey, Field Studies, Workshop, A/B Testing, Literature Review, Competitive Analysis, Persona, User Flow, Journey Map, Storyboarding, Matchmaking, Overleaf (LaTeX)

Managemnet

PM handbook, Roadmap, Sprint, Agile (Scrum, Kanban), Lean Startup, MVP Design, Miro, Trello, Jira, ClickUp, Notion, Google Workplace, Linear

Design

Figma, Adobe Photoshop, Adobe Illustrator, Spline, UX/UI Design, Product Design, Learning Experience Design, Interactive Design, Human-centered Design, Accessible Design, AdaptiveUIs (AUI), Prompt Engineering, Wireframes. Prototyping, Data Visualization, Information Architecture, Content Strategy, Video Editing, Framer, Wix, H5P, Voiceflow, Articulate360, Canva

Work Experience

Mrs Wordsmith – Word Tag

Jan. 2025 – Aug.2025 | London (remote), UK **Product Researcher**

A venture-backed EdTech company reaching millions with gamified vocabulary and reading apps, named a 2024 TIME Top EdTech Company.
• Designed the Onboarding Diagnostic Word Game and Word Fair mini-games from scratch. Enhanced diagnostic precision and learner engagement through extensive diagnostic word game research and competitive analysis.
• Strengthened product usability and iteration by leading 2 rounds of comprehensive playtests, including protocol design, participant recruitment, and post-test analysis to identify issues and prioritize refinements.
• Facilitated transparent design communication with modular and accessible Design Guides that clarified design rationale and specifications.

Aishang AI – Beijing Jiezuxiandeng Education Technology Co.

Apr. 2020 – Feb. 2023 | Beijing, China **Product Engineer | UXR**

A Series B-funded K-12 AI education platform serving 2000+ B2B clients.
• Built and shipped teacher- and student-facing features end-to-end using Python/JavaScript, REST/GraphQL, and SQL/NoSQL (MongoDB).
• Managed and maintained product infrastructure on AWS (Lambda, API Gateway, S3) with Docker/ECS and CI/CD (Git, Jenkins, Postman) to ensure reliable deployment.
• Translated user research into specs and Figma prototypes, collaborating with designers to ensure smooth handoff and consistent UX across interfaces.
• Drove cross-functional collaboration under Agile (Scrum-based) workflow using Notion for sprint planning with product and data-science teams.
• Partner-facing: communicated complex technical concepts to B2B partners and educators, translated creative requirements into technical specs, and led onboarding workshops that improved adoption and sustained engagement.

Apr. 2019 – Apr. 2020 | Beijing, China **Product Manager**

Led early-stage development of Aishang’s AI-powered K-12 education platform, serving 2,000+ partner schools.
• Defined K-12 program strategy and mapped student and teacher journeys, integrating AI-driven recommendation and feedback features that identify weak concepts, suggest targeted practice, and personalize learning paths.
• Led cross-functional teams (engineering, data science, curriculum, and design) to launch a teacher content-authoring and distribution system, enabling teachers to flexibly assemble and publish customized exercise sets by topic, difficulty, and regional curriculum version—supporting both class-wide and individualized assignments.
• Piloted a standardized AI-human classroom model, training teachers to integrate system features across full workflow for high-efficiency lesson management and professionalized instruction.
• Used data-driven feedback loops to refine AI algorithms, content strategy, and user engagement.

Xueda Education Technology Group

Aug 2015 – Apr 2018 | Yinchuan, China **Math Teacher**

A leading Chinese education company impacting millions through personalized K-12 tutoring and full-time academic programs.
• Taught mathematics across grades 7-12; broke down complex and abstract concepts into manageable knowledge points and problem-solving skills, and used differentiated instruction to increase student engagement and interest—contributing to a ~50% referral rate.
• Authored problem-solving workbooks that connected concepts, taught flexible strategies, built learner confidence, and improved student performance (95% score gains on school exams).
• Mentored new teachers on onboarding, lesson planning, and classroom management to strengthen instructional quality

Featured Projects

Math Village: An AI-Powered Math Learning Platform

CMU Spring 2025 **Project manager | Full-stack engineer**

• Independently researched and developed Math Village, a full-stack, AI-powered, evidence-based math learning platform featuring a student-facing web application and a teacher analytics dashboard. Integrated OpenAI API with math-specialized prompts to provide real-time AI tutoring and generate comprehensive learning analytics.
• Conducted in-depth user and competitive research, including interviews with target students and teachers to define learner personas and learning roadmaps. Designed and implemented the product from Figma prototypes to a full-stack application.
• Built a complete end-to-end system using React.js + TypeScript and Tailwind CSS for responsive frontend interfaces; Node.js/Express.js with RESTful APIs for the backend; SQLite for data persistence; and JWT for secure authentication. Set up a CI/CD pipeline with GitHub → Vercel (frontend) and Render (backend) for seamless auto-deployment.

Multimodal Reasoning in Math Geometry

Spring 2025 **Graduate Researcher, CMU**

• Conducted an extensive survey of multimodal math/geometry research and defined the problem of geometric reasoning in VLMs, highlighting common perception-reasoning failures.
• Co-developed a planner-VQA-reasoner pipeline that actively queries diagrams and separates perception from reasoning, enabling more accurate geometric fact extraction and logical consistency.
• Demonstrated that a GPT-4o + pipeline setup outperformed GPT-4V in description faithfulness (+16%) and reasoning coherence (+54%), showing the effectiveness of targeted querying compared to end-to-end VLMs.
• Performed systematic experiments and error analyses, diagnosing whether errors arose from misperception or faulty reasoning, and providing guidance for future model design.
Set up dev workflow with Git/GitHub+ Vercel, leveraging a Vite + Node.js build environment for streamlined releases.

Latent Diffusion Models for Image Generation

Fall 2024 **Graduate Researcher, CMU**

• Reviewed literature on DDPM, DDIM, VAE, and CFG to analyze trade-offs in image generation quality, inference speed, and controllability; set up the ImageNet-100 benchmark and co-designed standardized preprocessing pipelines.
• Co-implemented multiple generation pipelines and noise schedulers, and conducted quantitative analysis to evaluate efficiency, cost, and controllability trade-offs in diffusion models.

AI Merchant Solutions: Acquisition, Enablement & Delivery

Jun–Dec 2019 **Solution Specialist / AI Implementation Lead -Aishang AI**

• Presented Aishang AI’s K-12 education platform to partner schools and regional education providers, developing live demos and technical presentations that illustrated AI-driven teaching efficiency, student analytics, and localized education services, turning complex AI capabilities into clear instructional and business value.
• Collaborated with product, engineering, and content teams to tailor feature showcases and ensure technical accuracy and pedagogical relevance for diverse regional education contexts.
• Gathered partner feedback and technical inquiries during pre-adoption evaluations to inform product refinement and strengthen market positioning.

Customer-Driven Product Growth through Scalable Research & AI Enablement

Oct. 2019 – Jun. 2020 **Product Strategy & B2B Success Lead | User Research & Growth – Aishang AI**

• Led 200+ mixed-method user research sessions (online, regional, and on-site) to uncover critical adoption barriers and high-value opportunities for B2B AI products.
• Synthesized insights to evaluate commercial impact and user urgency, shaping a prioritized product proposal pipeline that guided strategic roadmap decisions.
• Partnered with enterprise clients to support onboarding and gather real-time feedback, ensuring a continuous flow of actionable insights.
• Drove cross-functional alignment to rapidly design and launch high-impact product updates, delivering measurable business growth, stronger user satisfaction, and increased client loyalty.

Spectrum Research Library – Collaborative HCI PhD Project

Spring 2025 **Software Developer | HCI Researcher | Instructional Designer**

• Independently built Spectrum Research Library from Figma prototypes to production (React/TypeScript/Tailwind), ensuring responsive and pixel-perfect UI across devices. Set up dev workflow with Git/GitHub+ Vercel, leveraging a Vite + Node.js build environment for streamlined releases.
• Conducted HCI-driven research and authored evidence-based instructional content across six challenge areas. Curated resources to support diverse learner needs with clarity and depth.