# Jianwei Ni

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## EDUCATION

**University of Illinois Urbana-Champaign |** ***IL, US*** ***Aug. 2023-Present***

***Bachelor of Science in Statistics & Computer Science (In Progress)***

**Instituion GPA:** 4.00/4.00

**Honors**: Deans List of 2023 Fall and 2024 Spring, Franz Hohn and J.P. Nash Scholarship

**Core Courses**: *Data Science in Python, Discrete Structure, Computer Science in Java, Computer Science in C++, Statistics and Probability, Intro to Information Science, Calculus III, Data Structures, Computer System, Linear Algebra, Statistics Modeling*

## PROFESSIONAL EXPERIENCES

**Immersive Intelligence Summer Camp (at UIUC) |** ***Co-founder & Curriculum Lead*** **|** ***Champaign, IL*** ***Aug. 2025-Present***

- Spearheaded the development of a 3-week comprehensive curriculum focusing on **Artificial Intelligence (AI)** and **Mixed Reality (MR)** for high-achieving high school students, bridging cutting-edge XR research with K-12 education
- Orchestrated strategic communications and negotiations with UIUC's GET (Global Education and Training) department to secure institutional support, manage complex venue logistics, and obtain official program certification
- Led the recruitment, interviewing, and vetting process for a high-caliber instructional team, including guest professors and teaching assistants, ensuring academic excellence and curriculum alignment
- Developed a comprehensive budgeting and pricing model, including break-even analysis and financial resource allocation, while managing marketing strategy and student recruitment for the July 2026 launch

**Carle Illinois College of Medicine |** ***Developer*** **|** ***Champaign, IL*** ***Aug. 2024-Present***

- Architected and engineered high-fidelity **visionOS** simulations, optimized response latency by transitioning from cloud-based (AWS) to local server architecture, achieving <3s end-to-end response time for real-time AI voice interactions
- Led human-subject research based on developed systems, conducting behavioral analysis and user studies (N=22) that resulted in accepted publications at **CHI 2026** and **IEEE AIxVR 2026**
- Mentored a cross-functional team of 10 junior developers and research assistants, overseeing code reviews and aligning technical execution with clinical requirements

**Atlas Copco Group |** ***Data Analyst Intern*** **|** ***Shanghai, China*** ***Jun. 2024-Aug. 2024***

- Developed a Python program that analyzes over 10,000 bidding announcements, efficiently filtering them down to approximately 100 with high potential for commercial opportunities, providing actionable insights to support the team in identifying valuable business leads
- Contributed to the upgrade of the company's OA system, aimed at improving cross-functional team efficiency, streamlining internal project management, and ensuring smooth deal workflows with dealers
- Conducted in-depth research on the loading and unloading times of sold air compressors using Smartlink, assisting the sales team in optimizing the customer proposal model and refining their product recommendation algorithm, ultimately increasing existing customer retention and repurchase rates

## SELECTED PROJECTS

**Gaussian-based Surgical Environment Reconstruction |** ***Champaign, IL*** ***May. 2025-Present***

- Leveraged **3D Gaussian Splatting (3DGS)** technology to architect a photorealistic, immersive virtual Operation Room, enabling high-fidelity spatial previews for medical trainees
- Fine-tuned environmental details and optimized real-time rendering to create a low-anxiety familiarization tool, specifically designed to reduce the cognitive load of novice students before their first clinical entry
- Integrated 3DGS-captured assets into a VR/MR pipeline, ensuring seamless navigation and interactive equipment orientation in a headset environment

**Lumbar Puncture Virtual Trainer |** ***Champaign, IL*** ***Aug. 2024-Present***

- Engineered a high-fidelity **Mixed Reality (MR)** training application on **Apple Vision Pro**, utilizing spatially anchored 3D animations to guide learners through lumbar puncture steps
- Integrated an LLM-powered conversational agent with optimized asynchronous response handling, reducing AI dialogue latency to under 3 seconds for seamless real-time tutoring
- Conducted behavioral analysis to define "proactivity boundaries," addressing cognitive load and social discomfort in AI-facilitated training (Accepted at **CHI 2026**)

## PUBLICATIONS

- D. Wang, W. Song, **Jianwei Ni**, Q. Zheng, Y. Zhou, K. Liang, M. Yao, C. Cao. "**Should the AI Speak First? Evaluating Proactive vs. Reactive Facilitation in Mixed-Reality Medical Training.**" In *Proceedings of the 2026 CHI Conference on Human Factors in Computing Systems* (**CHI '26**). *Accepted*.
- D. Wang, **Jianwei Ni**, Y. Zhou, W. Ding, W. Song, S. Jamison, M. Yao, C. Cao. "**SPATIALTUTOR: Object-Aware Mixed Reality Training for Procedural Medical Skills Training with AI-Driven Support.**" In *Proceedings of the 2026 IEEE International Conference on Artificial Intelligence and Virtual Reality* (**IEEE AIxVR '26**). *Accepted*.

## SKILLS

**Language Skills:** Mandarin (Native), English (Professional)

**Programming Skills:** Amazon Web Service, Google Cloud Platform, MongoDB, MySQL, Java, C++, Python, R, Unreal Engine 4 and 5, Swift, VisionOS development, Solid understanding of game mechanics and design principles

**AI Tools:** Familiar with AI and can proficiently use multiple types of AI, such as ChatGPT and Stable Diffusion