**Jingwen Gu**

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**Research Interests:** Reinforcement Learning (RL); Natural Language Processing (NLP); Next-generation RL Algorithms

**EDUCATION**

**Cornell University, Major:** Computer Science, Mathematics, Architecture  **Expected Graduation: May 2026**

**Cumulative GPA:** 4.065/4.3

**Relevant Coursework:** CS6789 Foundationsof RL (**A+**); CS4756 Robot Learning (**A+**); CS4780 Intro to ML (**A+**)

**Selected Honors and Awards:** Dean's List (All Semesters since Fall 2022); 2nd Place, Barbara G. Laurie Student Design Competition (October, 2022); OutstandingWinner, International Mathematical Modelling Challenge(IMMC), Greater China Region (March 2020); Finalist, Mathematical Contest in Modelling MCM/ICM (February 2020)

**PUBLICATIONS & CONFERENCE PRESENTATIONS**

1. Jiaru Zou\*, Ling Yang\*, **Jingwen Gu**\*(equal contribution), Jiahao Qiu, KeShen, Jingrui He, Mengdi Wang. (2025). ReasonFlux-PRM: Trajectory-Aware PRMs for Long Chain-of-Thought Reasoning in LLMs. *NeurIPS 2025.* *(arXiv:2506.18896)*
2. Bradley Guo, **Jingwen Gu**, Jin Peng Zhou, Wen Sun. (2025). Learning to Self-Correct through Chain-of-Thought Verification. *ICML 2025, 2nd Workshop on Test-TimeAdaptation: Putting Updates to theTest (PUT)*
3. Jin Peng Zhou, Katie Z Luo, **Jingwen Gu,** JasonYuan, Kilian Q. Weinberger, Wen Sun. (2025). Orchestrating LLMs with Different Personalizations. *arXiv preprint(arXiv:2407.04181).*
4. **Jingwen Gu**, Timur Dogan. (2025).Virtual Horizon Method: Fast Shading Calculations for UBEM using Lidar Data Rasterization. *Oral Presentation at IBPSA Building Simulation 2025.*

**RESEARCH EXPERIENCE**

Research Intern**, WEIRD Lab, University of Washington (Advisor: Prof. Abhishek Gupta)Jun. – Present**

● Conducting research on in-context reinforcement learning methods to robotic control and sim-to-real transfer;

● Implementing meta-RL algorithms in various robotic environments (e.g., IsaacLab, Robosuite);

● Achieved 31% improvement in trajectory returns after sim-to-real transfer.

Research Intern, **Cornell Computing and Information Science (Advisor: Prof. Wen Sun)Jan. 2024 – Present**

● Worked on multi-objective reinforcement learning (MORL) for language model personalization;

● Fine-tuned and aligned 7B-scale language models with PPO for multi-objective tasks;

● Evaluated and compared 5 different MORL methods, identifying trade-offs in reward balancing;

● Obtained 62% average win-rate against existing MORL methods on personalization.

Research Intern, **Environmental Systems Lab, Cornell University (Advisor: Prof. Timur Dogan)Aug. 2023 – May. 2025**

● Developed LiDAR-based ray tracing methods for urban topographies under Prof. Timur Dogan.

● Built a C# application interfacing with Vulkan and OpenGL, enabling fast urban shading simulations.

● Reduced computation time by **6x** compared to traditional methods.

**PROFESSIONAL & LEADERSHIP EXPERIENCE**

Chief Engineer & Co-founder, **Dereka AI, Seattle, WAJun. 2024 – Present**

● Implemented quantization, pruning, and knowledge distillation for large language model compression;

● Reduced model size and runtime memory by 10x while maintaining performance and inference latency;

● Built an MVP for an edge-device chatbot distilled from 7B LLMs, designed as a dungeon master;

Computer-Aided Architectural Design Intern, **Archi-Union Architects, Shanghai. ChinaMay – Jul. 2023**

● Mentored by lead architects Philip F. Yuan and Weizhe Gao;

● Produced parametric design scripts in Grasshopper for sun-shading materials;

● Contributed to design schemes of Sichuan Digital Rural Exhibition Center and SUSAS Gallery;

● Generated renderings and design development for the CSCEC Headquarters Office.

**PROFESSIONAL SKILLS**

**Programming Languages:P**ython (Proficient), Java (Proficient), C# (Proficient), C/C++ (Intermediate)

**Frameworks/Tools:** PyTorch, NumPy, Pandas, Transformers, OpenGL, Vulkan, LaTeX

**Languages:** Proficient in English, Native in Mandarin Chinese