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, WA**   **Jun. 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. China**   **May – 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: Python (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