Sara (Jingwen) Dou

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EDUCATION

New York University — New York, NY
Sept 2023 - May 2027

- B.F.A in Game Design
- B.S. in Computer Science
- Business of Entertainment, Media and Technology (BEMT) minor
- **Awards and Prizes**: Tisch School of the Arts Dean's List

Skills

- **Analytical & Investigative:** Document analysis, pattern identification, multi-source synthesis, evidence evaluation, report writing, critical reasoning.
- **Technical:** Python, Java, C#, C/C++, SQL, Unity, Unreal Engine, Git, scikit-learn, matplotlib, Node.js.
- **General:** Organization, communication, problem-solving, adaptability, cross-functional teamwork.

Publications

Preprints:

[6] **Dou, J.**, Xie, W., Wang, Y., Qu, X. *MindX: Real-Time Brain-Controlled Gaming Benchmark.* Submitted to **ICLR 2026**.

Peer-reviewed Papers:

[1] Wu, J., **Dou, J.**, Utoft, S. *Refining Human-Data Interaction: Advanced Techniques for EEGEyeNet Dataset Precision.* **HCI International**, 2024.

[2] Utoft, S., **Dou, J.**, Wu, J. *Enhancing EEG Data Quality: A Comprehensive Review of Outlier Detection and Cleaning Methods.* **KDD**, 2024.

[3] Wang, Y., **Dou, J.**, Xie, W., Qu, X. *EMIGC: An EEG Motor Imagery Controller for Real-Time Parkour Gameplay.* **HCI International**, 2025.

[4] Xie, W., Wang, Y., **Dou, J.**, Qu, X. *A Systematic Review of EEG-Controlled Directional Games.* **HCI International**, 2025.

[5] **Dou, J.**, Xie, W., Wang, Y., Qu, X. *From Theory to Play: A Review of EEG-Controlled Directional Games and Evaluation of Custom-Developed BCI Games.* **KDD**, 2025.

Work Experience

Infold Games — Level Design Intern
May 2025 – August 2025

- Implemented level designs in Unreal Engine using C++ and Blueprint scripting to create playable demos.
- Collaborated with design, art, and QA teams to test, refine, and integrate levels into the final game build. (successfully delivered 2 prototypes)
- Optimized level flow, lighting, and player navigation for better pacing and visual clarity.

Projects/Experience

Gunn Alumni website - student-run project
August 2022 - May 2024
Backend Lead

- Led a 5-person backend team and coordinated full-stack integration with frontend and design teams.
- Designed and implemented secure authentication and authorization systems.
- Built and maintained a structured database for multi-section content and user account management.

HMM POS Tagger - Bigram HMM for POS Tagging
September 2025
Self-programmed

- Developed a Bigram Hidden Markov Model with Laplace smoothing, OOV handling, and Viterbi decoding.
- Applied probabilistic reasoning to optimize tagging accuracy on Penn Treebank WSJ data.

Game Projects - Games I've created, (More shown in the itch website)

- Drift Edgeless - team leader, main programmer (Game for Good: Unending Adventure Game Jam) — August 2023
- Hell Sell - Programmer, System Designer (Global Game Jam 2024) — January 2024
- Coroner - Programmer (Scream Jam 2024) — October 2024
- The Meowfficer - programmer (published on Stem and Gx.games) — March 2025
- Little Act - Programmer (thatgamecompany × COREBLAZER GAME JAM 2025) — June 2025)

Honors & Awards

HackRU2023 Issued by Major League Hacking
October 2023

HackRU Education Track Winner and Best Use of Circle Track winner out of 300 participants.

> **HighFive** - A peer-to-peer tutoring platform designed to connect high school and college students. Users can showcase their skills, act as both tutor and learner, and foster a supportive, collaborative learning community.

Language

- English (native) • Mandarin (native) • Cantonese (conversational)