Jason Jisen Li

jasonjisenli@gmail.com • 862-400-5988 • Madison, WI

Research Interests

Algorithmic game theory • Multi-agent learning • Reinforcement learning • Strategic machine learning • Autonomous systems

Education

University of Wisconsin-Madison, Madison, WI **Expected May 2027**

Bachelor of Science in Computer Science, GPA: 4.0/4.0

Relevant coursework: Game Theory · Learning Theory · Stochastic Processes · Probability Theory · Linear Optimization · Linear Algebra · Artificial Intelligence

Publications

- J. J. Li, Y. Wu, Y. Zhu, J.-Y. Cai, and X. Zhu, "Pure Nash equilibria under the affine mechanism: A potential game of exaggeration," in *Proc. GameSec 2026*, to be published.

Research Experience

Pure Nash Equilibria under the Affine Mechanism **Nov 2025 - Jun 2026**

University of Wisconsin-Madison

- First author; paper accepted for oral presentation at GameSec 2026
- Characterized the Nash equilibrium of the Affine Mechanism Game under complete information
- Extended the analysis to the incomplete-information setting and characterized its Bayesian Nash equilibrium
- Co-authored the manuscript and drafted most of its formal proofs
- Developed Python programs to compute and visualize game behavior across multiple scenarios

Partially Observable Markov Game Solver **Feb 2025 - May 2025**

University of Wisconsin-Madison

- Implemented Nash Q-learning and deep Q-learning methods in Python and PyTorch for partially observable Markov game environments
- Analyzed algorithmic solvability across game scenarios; identified solvable cases and diagnosed causes of non-convergence

Sturgeon Re-Identification **May 2024 - May 2025**

Beijing Academy of Agriculture and Forestry Sciences

- Contributed to a deep learning pipeline for sturgeon re-identification (ReID)
- Curated a 6,000-image dataset and designed image acquisition and labeling protocols
- Fine-tuned and integrated YOLOv8 as the detection module in the pipeline; generated detector-aligned crops for ReID training/inference

Professional Experience

Epic Systems **May 2026 - Jul 2026**

Software Development Intern

- Designed and implemented an automated workflow for Beaker, Epic's Lab Information System

- Built frontend workflow logic in JavaScript and C# and developed a backend prototype for transforming unstructured input into structured records
- Authored design documents and led feedback sessions with cross-functional teams and customers to validate requirements and refine the workflow

University of Wisconsin-Madison **Jan 2026 - May 2026**

Peer Mentor

- Hosted office hours for CS 540: Introduction to Artificial Intelligence
- Helped students understand AI concepts, assignments, and debugging strategies
- Reported student feedback and assignment issues to instructors

Bohr Systems **May 2025 - Aug 2025**

Software Engineering Intern

- Designed a camera-only visual localization pipeline for UAVs operating in GPS-denied environments
- Evaluated localization algorithms and recommended ORB based on system requirements
- Implemented an end-to-end ORB localization prototype in Python, including feature extraction, matching, geometric verification, and map search

Projects

Online Multiplayer Boggle Game **Feb 2026 - May 2026**

- Developed an online multiplayer Boggle game with matchmaking, timed rounds, user accounts, and score tracking
- Built Java/Spring Boot backend features for lobby management, synchronized gameplay, persistent storage, and score calculation
- Added frontend features and JUnit/MVC tests in CI/CD, contributing to over 80% code coverage; served as product owner

Relational Database Engine **Feb 2025 - May 2025**

- Developed core modules of a distributed relational database in C++, contributing approximately 1,000 lines of code
- Implemented SQL parsing for SELECT, INSERT, DELETE, and JOIN operations, along with HeapFile storage
- Built buffer-pool management using CLOCK replacement and transaction isolation with page-level locking

Intersection Detection for Autonomous Driving **Jan 2025 - May 2025**

- Led vehicle-to-intersection distance estimation in an SAE-sponsored competition
- Collaborated with the team to review existing detection methods, training workflows, and pretrained models, evaluating performance and computational requirements
- Implemented OpenCV filters, edge detection, and line detection to estimate the intersection location

Technical Skills

- Languages: Java | Python | C++ | C | C# | JavaScript
- ML/CV: PyTorch | OpenCV | YOLO (Ultralytics)
- AI Development: Claude Code | Codex
- Systems: Git | Docker | Linux | Bash
- Web Development: Spring Boot | React