

James Cui

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EDUCATION

University of Wisconsin-Madison

Madison, WI

Bachelor of Science in Computer Science, Certificate in Mathematics

Aug 2025

- **GPA:** 3.92 / 4.0
- **Relevant Coursework:** Algorithms, Software Engineering, Operating Systems, Data Structures, Artificial Intelligence, Deep Learning, Databases, Computer Networks, Object Oriented Programming, Computer Graphics, Combinatorics
- **Awards:** Academic Excellence Scholar, Dean's List (x5)

EXPERIENCE

PaperScore

Acton, MA

AI Engineer

Sept 2025 - Present

- Architected a multi-agentic evaluation pipeline using RAG and MCP to assess the novelty of incoming manuscripts.
- Developed an agentic web scraper using Browser Use capable of autonomously parsing and indexing 30+ journals per hour.
- Engineered C# backend services, implementing intelligent rate limiting and semaphores that cut external failure rates by 80%.
- Navigated undefined requirements to translate business ideas into requirements and pitched the strategies directly to the CEO.

MadAbility Research Group

Madison, WI

Computer Vision Research Assistant

Jun 2024 - May 2025

- Annotated **250+** images in Roboflow and trained a YOLO model in PyTorch, **15%** more accurate than COCO baseline
- Integrated OpenAI's Vision API with Python to generate real-time and personalized feedback from user image analysis
- Developed interactive Unity C# AR barriers for OCD therapy, improving patient zone avoidance success rates by over **60%**
- Researched object detection and AR strategies to define core technical requirements for new OCD assistive technologies

University of Wisconsin-Madison

Madison, WI

CS506 Software Engineering Peer Mentor

Jan 2025 - May 2025

- Assisted **200+** students during weekly tutorials, providing guidance on Agile, Maven, testing tools, and deployment workflows
- Mentored **50+** students one-on-one on Git, Scrum processes, and Docker setup, improving assignment turnaround times

PROJECTS

Smart Stock | [Live Demo](#), [Code](#)

Madison, WI

Java, Spring, Docker, React, Javascript, SQL

Feb 2024 - Present

- Led the entire backend development for a full-stack retail and warehouse inventory system using Java and Spring Boot
- Built a secure login and role-based access system with varying permissions with Spring Security to ensure data privacy
- Containerized all application services with Docker to create a consistent, streamlined development environment for the team
- Managed and prioritized a **150+** issue backlog as the role of Product Manager and led Agile sprint planning for weekly releases

Outlier | [App](#), [Code](#)

Acton, MA

JavaScript, HTML, CSS, Python, Firebase Authentication, Google Gemini API, Github Automation

- Engineered a full-stack puzzle game with a responsive frontend and user authentication, achieving 100 distinct weekly users
- Automated the content pipeline to generate and deploy new puzzles daily via the Gemini API without manual intervention
- Designed a dynamic, stateful UI with modern JavaScript to manage game progression, lives, and a post-game review mode

Neural Machine Translator | [Code](#)

Hong Kong S.A.R.

Python, PyTorch, Transformers, NLP, LSTM, NumPy

- Engineered a novel seq-to-seq translation system by fine-tuning a pre-trained BART Transformer model with Hugging Face
- Developed a robust PyTorch data pipeline to efficiently tokenize and batch large-scale text data and images for model training
- Implemented an evaluation framework using BLEU score, boosting translation quality with a **4x** improvement over baseline

MiniSpark | [Code](#)

Madison, WI

C, Git

- Coded a high-performance, multi-threaded C processing framework from scratch, architecturally inspired by Apache Spark

SKILLS

Languages: Python, Java, C/C++, SQL, JavaScript, Typescript, Go, Bash, C#, Jenkins

Frameworks/Libraries: PyTorch, TensorFlow, Spring Boot, Browser Use, Playwright, React, Node.js, MCP, RAG, JUnit

Tools: Docker, Git, Linux/Unix, AWS, Google Cloud, Postman, Roboflow, LATEX, Google Colab, LLMs, Prompt Engineering

Methodologies: Agile (Scrum, Kanban), DevOps, CI/CD, RESTful, OOP, Unit Testing, TCP/IP, Agentic Workflows