Jason (Jiancheng) Sun

AI-Focused Software Engineer | Full Stack | Data Engineering
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✦ **Explore my work and chat with my AI assistant at** www.sun-jason.com ✦

SKILLS & OTHER

Languages: Python (9 yrs) · SQL (5 yrs) · JavaScript (3 yrs)
AI / ML: AWS Bedrock · PyTorch · Scikit-learn · BERT · CNN/RNN · NLP Pipelines · Feature Engineering
Frontend & Backend: React · Next.js · FastAPI · Flask
Backend: FastAPI · **Flask** · **SQLAlchemy** · **Celery** · **Pandas** · **NumPy** · **RESTful APIs**
Cloud & DevOps: WS (EC2, EMR, S3, Lambda, Bedrock) · GCP (BigQuery) · Docker · Poetry · Jenkins
Testing & QA: Cucumber (BDD) · **Coverage** · **Pytest**

WORK EXPERIENCE

Eastern TV Broadcasting LLC | *Web Developer*   **Jun 2025 – Present**
- Replaced manual multi-platform video publishing with an automated script supporting **one-click multi-platform** upload and resumable uploads, eliminating recurring upload interruption issues.
- Deployed and configured cloud environment supporting **up to 50** concurrent video upload/download users.
- Designing an **AI Agent** to automatically generate video descriptions and tags from video metadata, reducing content production overhead (in development).

Walmart – Warden Data Team | *Data Engineer*   **Jan 2025 – May 2025**
- Built production-ready data lineage pipelines using Python, Pandas, and NumPy to track data flow for the Warden cybersecurity team.
- Collected cybersecurity vulnerability data from NVD and generated structured metadata in **GCP BigQuery.**
- Collected NVD vulnerability data, stored structured metadata in **BigQuery**, and built interactive Dash dashboards.
- Wrote **unit tests** with Coverage reporting to maintain code quality and ensure pipeline reliability.
- Collaborated with cross-functional teams on data infrastructure management and **CI/CD** best practices.

Happy Programming | *Programming Instructor*   **Jun 2024 – Dec 2024**
- Taught three progressive courses (Pytho,NumPy, Pandas, AI/ML) to students in grades 7–12.
- Designed hands-on project-based curriculum that guided students building their first ML project.
- Provided one-on-one technical mentoring and feedback; organized end-of-term project presentations.

PROJECTS

AI-Powered Personal Portfolio with Conversational RAG Assistant   **Dec 2025 – Present**
Stack**: Poetry** · **Next.js** · **FastAPI** · **Python** · **AWS Bedrock** · **Vercel | sun-jason.com**
- Built a full-stack portfolio site with an embedded AI chat assistant, managed dependencies with **Poetry**.
- Designed a **RAG** pipeline with a Confluence-derived Markdown knowledge base; enforced grounded responses via jailbreak-resistant prompts.
- Exposed **FastAPI** backend, configured **Vercel CI/CD** for zero-downtime frontend deployments.

Church Library Full-Stack Management System   **Nov 2024 – Aug 2025**
Stack: **React** · **Vite** · **Flask** · **PostgreSQL** · **RESTful API |** www.churchlibdl.org
- Built a full-stack library management platform serving 500+ registered users with a catalog of 5,000+ books, supporting self-service borrowing, returns, and renewals.
- Developed a decoupled React (Vite) frontend and Flask backend with RESTful APIs, deployed on Heroku.
- Implemented email verification, password reset, and due-date reminders using Flask-Mail and APScheduler.

Large-Scale Distributed NLP Analysis System   **Sep 2022 – Jan 2023**
Stack: **Python** · **AWS EC2/EMR** · **Spark** · **Hadoop** · **Scikit-learn**
- Built a distributed NLP pipeline processing 21M+ Reddit comments to study topic-sentiment relationships.
- Optimized Spark resource allocation (executor memory, parallelism) to improve throughput; designed scalable batch architecture on AWS EMR.

EDUCATION

Georgetown University	- **M.S. Computer Science**	**Sep 2021 – May 2023**
ShanghaiTech University	- **B.Eng. Computer Science**	**Sep 2017 – Jul 2021**