Xuhui (Daniel) Zhan

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EDUCATION

MS Data Science — Aug 2023 - May 2025
Vanderbilt University, Nashville, TN 3.98/4.00 (Graduate Teaching Fellowship)

BS Data Science — Aug 2018 - Jun 2022
Hong Kong Baptist University, Hong Kong, CN 3.5/4.0 (First Class Honours, Highest Distinction)

EXPERIENCE

Applied Scientist — Sept 2025 – Present
Treverse LLC, Nashville, TN

- Multilingual translation service (production): Go microservice on AWS for Spanish/English item metadata with LLM-based translation and evaluation.
- Unified AI platform (in progress): AWS-based AI/ML platform using Terraform, Kubernetes, Airflow, Argo CD, and GitHub Actions for standardized CI/CD and monitored deployments.
- Vision-based pre-sorting (in progress): Edge-first barcode detection/decoding system for high-speed, irregularly shaped items, integrated with industrial cameras and conveyor hardware.
- Recommender system (in progress): Marketplace recommendation models on the AI platform generating item suggestions to increase engagement for hundreds of thousands of users.

Lead AI & Data Science Researcher — Oct 2023 – May 2025
Vanderbilt University — AI Negotiation Lab, Nashville, TN

- Built an LLM pipeline that auto-codes negotiation transcripts, cutting per-transcript cost from \$5 000 to \$3 ($>$99% savings) and boosting human–AI agreement from 30% to 80%.
- Developed a novel algorithm that injects population-level variation into LLM negotiator agents, yielding realistic and diverse subject pools for negotiation studies.
- Lead the full ML lifecycle;from data engineering through Web deployment, while collaborating closely with negotiation scholars and data-science peers.
- Work presented at the 2025 AI Negotiation Summit (Harvard/MIT) and the International Association for Chinese Management Research annual meeting.

Algorithm Engineer — Jun 2022 – Apr 2023
Suzhou AGV Robot Co. Ltd., Suzhou, CN

- Optimized and automated deployment of ROS-based localization algorithms for Automated Guided Vehicles (AGVs), facilitating efficient rollout to new product lines.
- Developed and shipped an end-to-end vision storage-detection system (YOLO · OpenCV · PyTorch $\rightarrow$ ONNX · Django) deployed across more than 30 warehouses.
- Standardized deployment pipelines and hardware configurations, enabling streamlined, one-click installations company-wide.

SKILLS

ML & Deep Learning	PyTorch, JAX, TensorFlow, Hugging Face Transformers, scikit-learn
MLOps & Platforms	Kubernetes, Argo CD, Airflow, Ray/KubeRay, MLflow, Helm, Kustomize, Terraform
Cloud Platforms	AWS, Azure, GCP
Programming Languages	Python, Go, C++, SQL, TypeScript, Bash