XUBIN SUN

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EDUCATION BACKGROUND

Kean University   Union, NJ │ Sep. 2022-Jun. 2026 (Expected)

➢ **Major:** Computer Science; GPA: 3.909/4.0; Ranking: 9/140

➢ **Minor:** Mathematics Science

Honors: Dean's List (Spring & Fall 2023, Spring & Fall 2024, Spring 2025); Dean's Scholarship-Third Class (2022-2023); Dean's Scholarship-Second Class (2024-2025)

PUBLICATIONS

Sun, X., Li, D., & Yang, G. (2024). Privacy dataset distillation for medical imaging using class centralization and covariance matching for OCTMNIST. In *Proceedings of the Fourth International Conference on Advanced Algorithms and Signal Image Processing (AASIP 2024)*, Vol. 13269, 132690D. DOI: 10.1117/12.3045706

Yang, G., Qi, J., & **Sun, X.** (2024). Robust medical image classification with curvature regularization on the PATHMNIST. In *Proceedings of the Fourth International Conference on Computer Graphics, Image, and Virtualization (ICCGIV 2024)*, Vol. 13288, 132880W. DOI: 10.1117/12.3044867

Li, B., Zhong, Z., Zhang, H., **Sun, X.**, & Ihnaini, B. (2025). Improving negative rejection ability in language models: A review of fine-tuned LLMs, RAG, and RAFT. In *Journal of King Saud University Computer and Information Sciences* (SCI). DOI: 10.1007/s44443-025-00334-6

RESEARCH EXPERIENCE

Virtual Avatar Development System for Dementia Patients

Team Member, Supervised by Prof. Malihe Aliasgari   Union, NJ │ Jan. 2025-May 2025

➢ Enabled mutual conversion between speech and text in human-computer interaction using STT and TTS models, achieving 92% average speech recognition accuracy.

➢ Integrated a RAG-based large language model to generate dialogue tailored for patients with dementia, keeping response times around 3-4 seconds to ensure smooth user experience.

➢ Synchronized digital avatar's lip movements and emotional expressions with speech using Unreal Engine 5 and Audio2Face.

Optimization and Explainable Analysis of a Deep Learning–Based Plant Disease Classification System

Team Member, Supervised by Prof. Omar Dib   Wenzhou, China │ May 2024-Jun. 2025

➢ Designed and trained multiple CNN models for a five-class disease image classification task, improved accuracy to 91% via model stacking, and addressed class imbalance through data augmentation and resampling techniques.

➢ Visualized decision process with Grad-CAM, enhancing model interpretability and transparency.

➢ Developed a Streamlit-based web application integrated with ChatGPT, enabling users to upload plant disease images and receive classification results with specific treatment recommendations.

Robust Medical Image Classification with Curvature Regularization on the PATHMNIST

Team Member   Wenzhou, China │ May 2024-Aug. 2024

➢ Developed a new deep learning framework, MedMamba, applying curvature regularization by controlling Hessian eigenvalues to increase model robustness.

➢ Designed a dual-branch SS-Convd-SSM module that combined dilated and depthwise separable convolutions with attention to ensure precise feature extraction.

➢ Carried out adversarial attacks using Fast Gradient Sign Method and Projected Gradient Descent to test stability under noise and perturbations, resulting in only a 5.6% drop in average accuracy and 4.1% drop in AUC.

Privacy Dataset Distillation for Medical Imaging Using Class Centralization and Covariance Matching for OCTMNIST

Team Leader   Wenzhou, China │ Mar. 2024-Jul. 2024

➢ Co-designed a data distillation method that introduced class-centric and covariance-matching constraints, balancing privacy protection with retention of key data features.

- Conducted multiple OCTMNIST distillation experiments under varied images-per-class (IPC) settings (1, 2, 5, 10) to validate robustness and generalization capability.
- Performed benchmarking against leading distillation methods (DC, DM, and DSA3) to evaluate model stability and classification accuracy, and reached 47.25% accuracy under IPC 1, surpassing existing best results.
- Assessed privacy protection by quantifying differences between original and distilled images, with cross-class Structural Similarity Index ranging 0.68－0.75 and L2 norm ranging 0.59－0.65, ensuring effective anonymization.

INTERNSHIP EXPERIENCE

Zoom Communications, Inc.   Hangzhou, China│Dec. 2025-Present
AI Product Intern, Platform R&D Department
- Led requirements planning and delivery for Zoom Present AI features, coordinated product, design, frontend, backend, and QA teams to align on reviews and drive development and acceptance on schedule.
- Produced 4+ core PRDs and promoted review approval and implementation; established a standardized interaction model and defined error-handling rules to support launch evaluation and iteration.
- Conducted 5+ competitive analyses and benchmarking studies, built a multi-dimensional comparison framework, identified differentiation opportunities, and translated insights into product decisions.

Alibaba Cloud, Lingyang Intelligence Technology Co., Ltd   Hangzhou, China│Jul. 2025-Sep. 2025
Product Operation Intern, Dataphin Product R&D Department
- Created 50+ English demos on Storylane covering Copilot and NL2SQL, built reusable templates with standardized scripts and storyboards, and published them across 6 channels such as Alibaba Cloud website and WeChat Mini Program.
- Developed a demo data dashboard to track views, traffic sources, retention, and conversions by channel and topic, and highlighted drop-off points and bottleneck pages as a reference for content selection and video pacing.
- Organized demo embed links by channel into an online and searchable library, and established naming and versioning rules to reduce retrieval time and improve reuse efficiency.
- Investigated data governance platforms (e.g., NetEase ShuFan and IBM), evaluated 12 metrics across functional fit, technical reliability, cost, and service sustainability, and contributed to product positioning and unique value proposition.

Deloitte China Hangzhou Branch   Hangzhou, China│May 2025-Jul. 2025
Data Platform Developer, Technology & Transformation
- Participated in full backend development process, including requirements documentation, Axure prototyping, database design, API development, and Postman integration testing.
- Designed and optimized backend interfaces in Spring Boot and MyBatis, such as supplier quality management, customer information retrieval, and SAP CSB payroll, enhancing system maintainability.
- Built an API gateway information management module to synchronize API data from Alibaba Cloud, classify APIs by business centers, and track utilization rates for ongoing monitoring.
- Developed custom features on DingTalk using XXL-JOB, including data submission reminders, account deactivation notifications, and SMS verification.

EXTRACURRICULAR ACTIVITIES

IT Department, WKU Library│*Assistant*   Jun. 2023-Present
- Developed web crawlers to collect high-rated books (rating ≥ 8) from Douban and wrote data validation scripts to ensure correct book code formats and data accuracy.

Department of Computer Science, WKU│*Teaching Assistant*   Jun. 2023-Dec. 2024
- Organized workshops for academic Q&A, assisted in grading coding assignments, and evaluating final projects.

New Media Department, Wharf Poetry Club│*Head*   Jun. 2023-Sep. 2024
- Published original poetry and articles on a weekly basis and managed publicity for club events and activities.

SKILLS & INTERESTS

- **Languages:** Chinese (Native); English (GRE: V: 160＋Q: 170＋AW: 4.0)
- **Computer Skills:** Java (4yrs); Python (3yrs); R; MySQL (3yrs); Linux; Visual Basic (7 yrs); Axure; PS
- **Interests:** Fitness; Short video creation (multiple videos >200K views, top video 29M views)