Xiao Shi

Madison, WI

Tel: +1 412 909 6275

Email: xiao.shi@wisc.edu

Webpage: https://xiaoshi2610.github.io/

Education

University of Wisconsin–Madison   Madison, WI

Ph.D. Student, Electrical and Computer Engineering   Jan 2026 – Present

Advisor: Prof. Ulugbek S. Kamilov

Washington University in St. Louis   St. Louis, MO

M.S. in Engineering Data Analytics & Statistics   Aug 2024 – Dec 2025

GPA: 3.84 / 4.00

Carnegie Mellon University   Pittsburgh, PA

M.S. in Management   Sep 2022 – Jun 2024

GPA: 3.78 / 4.00

Central University of Finance and Economics   Beijing, China

B.Sc. in Economics (Finance)   Sep 2018 – Jun 2022

GPA: 3.61 / 4.00

Awards

CMU Heinz College Dean's List, 2023–2024

Publications

Shirin Shoushtari, Yi Wang, **Xiao Shi**, Salman Asif, Ulugbek S. Kamilov.

EigenScore: OOD Detection using Posterior Covariance in Diffusion Models.

In: The Fourteenth International Conference on Learning Representations (ICLR), 2026.

Projects

Navigating Constraints to Provide Services in Allegheny County Jail   Jan 2024 –
May 2024

Advisor: Prof. Mariana Escallon Barrios

Technologies: Python, Scikit-learn

- Developed a machine learning pipeline to optimize decision-making tools for identifying individuals eligible for service provision.

Large Language Model on OpenWebText   May 2024

Technologies: Python, PyTorch

- Built a decoder-only GPT-style model pretrained on a 65GB OpenWebText subset.

- Fine-tuned on CNN DailyMail and SQuAD datasets for summarization, QA, sentiment analysis, and NER.

- Designed task-specific prompts to enable multi-task performance.

Speech Recognition with Transformer Architecture   Apr 2024
Technologies: Python, PyTorch

- Developed an encoder-decoder CNN-LSTM model with transformer enhancement.

- Pretrained on MFCC feature datasets to improve speech representation learning.

- Integrated transformer layers to model long-range word dependencies.

VGGFace2 Face Classification and Verification   Feb 2024
Technologies: Python, PyTorch

- Implemented a ConvNeXt-based CNN trained on 7,000+ samples.

- Adapted the model for verification using cosine similarity.

Minority Language Captioning Contest   Nov 2022 – Dec 2022
Technologies: Python, PyTorch

- Built an image captioning system trained on 150,000 image-caption pairs.

- Generated captions in Hausa, Kyrgyz, and Thai.

- Used InceptionV3 for feature extraction and LSTM with attention for language modeling.

Work Experience

Computational Imaging Group, WashU   St. Louis, MO
Research Assistant   May 2023 – Sep 2023

- Conducted experiments on out-of-distribution detection.

- Researched inverse problems, computational imaging, and generative models.

PatSnap   Shanghai, China
Data Scientist   May 2023 – Sep 2023

- Designed end-to-end ML pipelines for user persona and market prediction.

- Processed 100,000+ user records using Spark on AWS.

Related Coursework

Graduate Level:
Dynamic Systems, Stochastic Processes, Optimization, Bayesian Learning, Time Series, Statistical Reasoning, Machine Learning, Large-Scale Machine Learning, Database Management, Econometrics, Deep Learning, Data Structures, Algorithms

Undergraduate Level:
Mathematical Analysis, Advanced Algebra, Probability, Statistics, Applied Time Series, Machine Learning & Pattern Recognition, Game Theory

Skills

Programming: Python, Java, R, MATLAB
Database: SQL
Languages: Mandarin (Native), English