Wenbo Zhang

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EDUCATION

University of Rochester Sep 2021 – May 2025
Bachelor of Science, Major in Computer Science and Applied Mathematics; **High Distinction**

University of Rochester Jun 2025 – May 2030 (Expected)
Doctor of Philosophy in Computer Science
Advisor: Professor Christopher Kanan

PEER-REVIEWED PUBLICATIONS

Zhang, W., Chen, J., Kanan, C. (2025) INSIGHT: Explainable Weakly-Supervised Medical Image Analysis. *Machine Learning for Healthcare (MLHC) 2025.*

PEER-REVIEWED ABSTRACTS & PRESENTATIONS

Zhang, W., Chen, J., Kanan, C.
INSIGHT: Explainable Weakly-Supervised Medical Image Analysis
IEEE Western NY Image and Signal Processing Workshop (WNYISPW) 2024 — Abstract only, **Oral**

Zhang, W., Chen, J., Kanan, C.
INSIGHT: Explainable Weakly-Supervised Medical Image Analysis
Machine Learning for Healthcare (MLHC) 2025 — **Poster**

Zhang, W., Chen, J., Kanan, C.
INSIGHT: Explainable Weakly-Supervised Medical Image Analysis
Machine Learning in Computational Biology (MLCB) 2025 — Abstract only, **Poster**

RESEARCH EXPERIENCE

Explainable Aggregators for Radiology and Pathology Rochester, NY
Research Assistant in Prof. Chris Kanan's Lab Aug 2023 - Present

- Created the INSIGHT model for binary and multi-label classification and segmentation of CT volumes and pathology whole slide images (WSIs).
- Incorporated a novel inductive bias into the architecture that facilitates explainability by having heatmaps built into the architecture and for combating shortcuts.
- Using only weak labeling at the WSI or volume-level, INSIGHT achieves strong classification and semantic segmentation results for cancer classification, cancer sub-typing, and more.
- Project website is available at: https://zhangdylan83.github.io/ewsmia/

PROFESSIONAL EXPERIENCE

Shanghai Xuanju Information Technology Co., Ltd Shanghai, CN
Artificial Intelligence Developer Intern Jun 2023 - Aug 2023

- Utilized YOLOv5 for vehicle and license plate detection models in the "Smart City" project to monitor construction material transport trucks, ensuring they rinse within designated areas and documenting non-compliance incidents in real-time.
- Integrated Optical Character Recognition (OCR) to automatically identify license plate numbers.
- Employed CNN-based license plate color classification model in PyTorch to distinguish material transport trucks from other vehicles for surveillance purposes.
- Processed data, trained models, and tuned performance to achieve high accuracy of up to 90% under different environmental conditions.

TEACHING EXPERIENCE

University of Rochester Rochester, NY
Teaching Assistant Jan 2024 - Present

- Led weekly 75-minute tutoring sessions for the Computation and Formal Systems course.
- Graded student projects and assisted students with C programming assignments and course projects.

COMPUTING SKILLS

Programming Languages: Python, Java, C, HTML, CSS, JavaScript, SQL, Swift
Tools: Matplotlib, Pandas, NumPy, PyTorch, Flask, Git, Core Data, SwiftUI, WeightS & Biases