YU ZHANG

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EDUCATION

University of Kentucky *Aug. 2017 - Present*
Ph.D. in Computer Science
Overall GPA: 3.87/4.00

Northeastern University, China *Sept. 2013 - June 2017*
B.E. in Telecommunications Engineering

SKILLS

Experience: Deep Learning, Machine Learning, Computer Vision, Medical Image Analysis
Programming Languages: Python, MATLAB, C, C++, Shell, SQL
Open Source Tools: Pytorch, Keras

PROFESSIONAL EXPERIENCE

Research Assistant, University of Kentucky, Lexington, KY *Summer 2019 - Present*

- Unsupervised domain adaptation for mammogram image classification and semantic segmentation.
- Data augmentation, neural network generalization, and adversarial training for medical images.
- Deep learning on astrophysics data, magnetic field classification/regression on unbalanced dataset.

Teaching Assistant, University of Kentucky, Lexington, KY

- CS215: Introduction to Program Design, Abstraction and Problem Solving *Spring 2019*
- CS216: Introduction to Software Engineering Techniques *Fall 2018, Fall 2019*
- CS371: Introduction to Computer Networking *Spring 2018*

PUBLICATIONS

1. **Yu Zhang**, Gongbo Liang, Tawfiq Salem, Nathan Jacobs. "Defense-PointNet: Protecting PointNet Against Adversarial Attacks". In *IEEE International Conference on Big Data (BigData) Workshop: The Next Frontier of Big Data From LiDAR*, 2019.
2. **Yu Zhang**, Xiaoqin Wang, Hunter Blanton, Gongbo Liang, Xin Xing, Nathan Jacobs. "2D Convolutional Neural Networks for 3D Digital Breast Tomosynthesis Classification". In *IEEE International Conference of Bioinformatics and Biomedicine (BIBM)*, 2019.
3. Gongbo Liang, Xiaoqin Wang, **Yu Zhang**, Xin Xing, Hunter Blanton, Tawfiq Salem, Nathan Jacobs. "Joint 2D-3D Breast Cancer Classification". In *IEEE International Conference of Bioinformatics and Biomedicine (BIBM)*, 2019.
4. Gongbo Liang, **Yu Zhang**, Jinze Liu, Nathan Jacobs, Xiaoqin Wang. "Training Deep Learning Models as Radiologists: Breast Cancer Classification Using Combined Whole 2D Mammography and Full Volume Digital Breast Tomosynthesis". In *Radiological Society of North America 105th Scientific Assembly and Annual Meeting (RSNA)*, 2019. [Abstract]
5. **Yu Zhang**, Gongbo Liang, Nathan Jacobs, Xiaoqin Wang. "Unsupervised Domain Adaptation for Mammogram Image Classification: A Promising Tool for Model Generalization". In *Conference on Machine Intelligence in Medical Imaging (C-MIMI)*, 2019. [Abstract]

TALKS

- "Defense-PointNet: Protecting PointNet Against Adversarial Attacks", Dec. 2019, IEEE BigData LiDAR Workshop, Los Angeles, CA
- "Unsupervised Domain Adaptation for Mammogram Image Classification: A Promising Tool for Model Generalization", Sep. 2019, C-MIMI, Austin, TX

AWARDS

- Conference Travel Grant, University of Kentucky, 2019
- ATS Fellowship, University of Kentucky, 2017-2018

SERVICE

- Reviewing for IEEE Winter Conference on Applications of Computer Vision (WACV 2020)