

# YU ZHANG

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## EDUCATION

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**University of Kentucky**, Lexington, KY

*Aug. 2017 - Present*

Ph.D. in Computer Science

Overall GPA: 3.83/4.0

**Northeastern University**, Shenyang, China

*Sept. 2013 - June 2017*

B.E. in Telecommunications Engineering

## SKILLS

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**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

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**Research Assistant**, University of Kentucky, Lexington, KY

*Summer 2019*

- Unsupervised domain adaptation for mammogram image classification and semantic segmentation.
- Data augmentation, neural network generalization, and adversarial training for medical images.

**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

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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

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- “Defense-PointNet: Protecting Point-Net 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**

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

## **SERVICE**

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