

Jinnian Zhang

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415 W Gilman Street Apt 309, Madison, WI 53703

EDUCATION BACKGROUND

University of Wisconsin-Madison, Madison, WI

PhD of Electrical Engineering (Sept.2017- May. 2021)

Overall GPA: 4.0/4.0

Beijing University of Posts and Telecommunications (BUPT), Beijing China

Bachelor of Engineering in Information Engineering (Sept.2010 - Jun. 2014)

Ranking: 19/175

Master of Science in Information and Communication Engineering (Sept.2014 - Mar.2017)

Ranking: 1/775

RESEARCH INTERESTS

Deep Learning in Medical Imaging; Computer Vision; Compressive Sensing; Image Processing

WORK EXPERIENCE

Algorithm Research Intern (Alibaba, Seattle)

May. 2019 - Aug. 2019 (Expected)

- Expected to research and develop algorithms in Computer Vision, Natural Language Processing or Speech
- Provide big data analysis and modeling solutions to expand business frontiers
- Will publish papers at conferences (such as CVPR, ICCV, NeurIPS, etc.)

RECENT PROJECTS

DeepRad: An Accessible, Open-source Tool for Deep Learning in Medical Imaging

Advisor: Prof. Varun Jog (ECE UW Madison) & Dr. Alan McMillan (Radiology UW Madison)

Funded by ML4MI Initiative, UW Madison

Sept. 2018 - Present

- Develop a cross-platform interface by using GUI toolkit PyQt and TensorFlow as underlying backend
- Implement and demonstrate classification, segmentation, synthesis deep learning models for medical imaging
- Create data augmentation tools in Python that apply physics-based principles to improve DL model performance

DL Anatomy Boundary Detection for PET/MR Attenuation Correction

Advisor: Prof. Varun Jog (ECE UW Madison) & Dr. Alan McMillan (Radiology UW Madison)

Cooperated with GE Healthcare

May. 2018 - Aug. 2018

- Used VGG19, Xception, ResNet, and InceptionResNetV2 to determine the boundary of different anatomies
- Programmed in Python and Keras with TensorFlow as backend based on over 40,000 images in dataset
- Generated heatmap to explain the effectiveness of deep neural networks

Robust Design for CNN Architecture

Advisor: Prof. Varun Jog (ECE UW Madison)

Mar. 2018 - Present

- Designed a DCGAN based image reconstruction algorithm and compared to compressive sensing methods
- Used the range of the generator as the manifold containing training images to denoise the input testing images
- Combined the generator and CNN to combat gradient ascent based adversarial examples

SKILLS

Languages: Proficient in C/C++, Python, MATLAB; familiar with Verilog, VHDL

Frameworks and Tools: TensorFlow, Keras, MXNet, PyQt, Linux, LaTeX, Scikit-learn, CVX-toolbox

SELECTED AWARDS

- ECE Chancellors Opportunity Fellowship (COF), UW Madison, Sept, 2017
- Graduate Student Innovation Fund of BUPT, Mar. 2017
- National Scholarship (Top 5%), Beijing, China, Oct. 2016