

Jinnian Zhang

+86 13041019385 jinnian.zhang@wisc.edu [Jinnian Zhang](#)

415 W Gilman Street Apt 309, Madison, WI 53703

EDUCATION BACKGROUND

University of Wisconsin-Madison, Madison, WI

PhD of Electrical Engineering (Sept. 2017- May. 2022)

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

SKILLS

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

Frameworks and Tools: TensorFlow, PyTorch, MXNet, PyQt, Linux, LaTeX

WORK EXPERIENCE

Research Intern (Alibaba Group, Hangzhou, China)

May. 2020 - Aug. 2020

- Proposed a Data Augmentation based Preferential Bayesian Optimization (DA-PBO) for automatic online parameter optimization of recommendation systems; achieved better performance than traditional PBO in synthetic experiments.
- Proposed a neural architecture search (NAS) method Rec-DARTS to automatically search best network architectures for recommendation systems in different application scenarios; achieved around 1.2% AUC improvement on public datasets compared to the start-of-the-art manually designed CTR models such as AFN.

Research Intern (Alibaba Group, Bellevue, WA)

May. 2019 - Aug. 2019

- Participated in the AutoML competition of KDDCup 2019 and won the 3rd place (over 161 teams).
- Achieved around 50% average cart value and 4.2% CTR improvement by proposing Gaussian process classification-based dueling bandit gradient descent algorithm and applying it to Taobao online business.

SELECTED PUBLICATIONS

- J. Zhang, A. McMillan, "Optimization of U-Net Structures for Medical Image Segmentation and Synthesis.", submitted to Journal of Radiology AI.
- J. Zhang*, Z. Liu*, V. Jog, P. Loh, and A. McMillan "Robustifying deep networks for image segmentation.", *arXiv 2019*, submitted to Journal of Digital Imaging.
- J. Zhang*, B. Guan*, W. Sethares, R. Kijowski, and F. Liu, "SpecNet: Spectral Domain Convolutional Neural Network.", *IEEE ISPASS workshop 2020*.
- J. Zhang, S. Hurley, V. Jog, and A. McMillan, "DeepRad: An Accessible, Open-source Tool for Deep Learning in Medical Imaging.", *ISMRM 2019, Montreal, Canada*. <https://github.com/mimrtl/DeepRad>

SELECTED RESEARCH PROJECTS

Automatic Optimization of U-Net Structures for Medical Image Segmentation and Synthesis

Advisor: Dr. Alan McMillan (Radiology UW Madison)

Sept. 2019 - present

- Applied Neural Architecture Search (NAS) to obtain the best 2D-UNets for medical image segmentation and synthesis by using the public MICCAI BraTS 2017 dataset.
- Conducted statistical analysis on the results and concluded that no optimal UNet architecture for both medical image segmentation and synthesis existed, but if a UNet architecture performs well in one task, so is in another task.

SELECTED AWARDS

- ICDPA/WCSE Best Presentation Award, July, 2020
- SIGKDD Student Travel Award, August, 2019
- KDD Cup 2019 3rd Place in AutoML Track, 2019
- 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