

XIAOJIAN XU

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EDUCATION

Washington University in St. Louis, St. Louis, MO 9/2017–Present

- Ph.D student in Computer Science, advised by Dr. Ulugbek Kamilov
- GPA: 3.85 / 4.00

University of Electronic Science and Technology of China, Chengdu 9/2014–6/2017

- M.Eng in Communication & Information Engineering
- GPA: 3.65 / 4.00

University of Electronic Science and Technology of China, Chengdu 9/2010–6/2014

- B.Eng in Communication Engineering
- GPA: 3.89 / 4.00

RESEARCH EXPERIENCE

Learning-based fast reconstruction for dynamic MRI 7/2018 – Present
Researcher St. Louis

- Successfully extracted the clinical data and transferred it to the learnable image data.
- Successfully built up the task based neural network for doing denosing for MRI data.
- Designed and tested various convolutional neural network structures and machine learning methods for the task.

Compressed proximal algorithm for nonconvex stochastic optimization 9/2018 – 1/2019
Researcher St. Louis

- Developed two compressed proximal based algorithms for stochastic optimization problems.
- Implemented models and experiments and were the first to prove the convergence of the algorithm.

Convolutional dictionary learning for MRI reconstruction 3/2018 – 6/2018
Researcher St. Louis

- Implemented a novel convolutional dictionary learning method for MRI reconstruction problems.
- Compared the performance with traditional patch-wise dictionary learning method and TV based model.

Some earlier research experience 3/2014 – 6/2017
Developer & Researcher Chengdu

- Development of Intelligent Home System.
- Design and simulation of constrained routing algorithms.
- Routing and resource scheduling algorithms for large-scale network SDN.

WORK EXPERIENCE

Head TA for ESE415 Optimization 1/2019–Present
Assistant Instructor St. Louis

- Assistant instructor, teach tutorial sessions, hold office hours, answer questions on piazza and via emails, develop tests and solutions, help grading exams and homeworks.

Supervisor for Research Experience for Undergraduates (REU) Program 7/2018–8/2018
Research Supervisor St. Louis

- Supervised undergraduates for research during summer.

LIST OF PUBLICATIONS

- X. Xu and U. S. Kamilov, "signProx: One-Bit Proximal Algorithm for Nonconvex Stochastic Optimization," Proc. IEEE Int. Conf. Acoustics, Speech and Signal Process. (ICASSP 2019) (Brighton, UK, May 12-17), in press. [arXiv:1807.08023]

- J. Liu, Y. Sun, X. Xu, and U. S. Kamilov, "Image Restoration using Total Variation Regularized Deep Image Prior," Proc. IEEE Int. Conf. Acoustics, Speech and Signal Process. (ICASSP 2019) (Brighton, UK, May 12-17), in press. [arXiv:1810.12864]

SKILLS

- **Languages:** Matlab, Python, C, Java
- **Skills:** Tensorflow, Deep learning
- **Certifications:** National 3-tier computer certificate (China), National 4-tier computer certificate (Network Engineer, China)

AWARDS

Scholarship

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|---|------|
| - Graduate Student First-Rank Academic Scholarship | 2016 |
| - Graduate Student Second-Rank Academic Scholarship | 2015 |
| - Graduate Student First-Rank Academic Scholarship | 2014 |
| - National Inspirational Scholarship | 2013 |
| - People's First-Rank Scholarship | 2012 |
| - National Inspirational Scholarship | 2011 |

Others

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|---|------|
| - Third-prize of 'Internet+' Entrepreneurship Competition in Sichuan Province | 2016 |
| - Great Award of Intelligent City Technology Competition | 2016 |
| - Award of Hackathon Programming Competition | 2015 |
| - Outstanding Graduate Student | 2015 |
| - Second Prize of Electronic Design Competition in UESTC | 2011 |