

Alan Qingran Wang

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Education

Cornell University

2024

Ph.D., Electrical and Computer Engineering

Ithaca, NY

- Focus: Machine Learning for Biomedical Imaging
- Advisor: Mert Sabuncu
- Thesis Committee: Chris Xu, Jayadev Acharya

University of Illinois at Urbana-Champaign

2019

B.S., Computer Engineering

Champaign, IL

- Thesis: Structural Consistency for Diverse Video Colorization
- Advisor: Alexander Schwing

Publications

* indicates equal contribution.

Joint Optimization of Hadamard Sensing and Reconstruction in Compressed Sensing Fluorescence Microscopy AQ Wang*, AK LaViolette*, L Moon, C Xu, MR Sabuncu. *International Conference on Medical Image Computing & Computer Assisted Intervention* 2021

HyperRecon: Regularization-Agnostic CS-MRI with Hypernetworks. AQ Wang, AV Dalca, MR Sabuncu. *Machine Learning for Medical Image Reconstruction* 2021

Neural Network-based Reconstruction in Compressed Sensing MRI Without Fully-sampled Training Data. AQ Wang, AV Dalca, MR Sabuncu. *Machine Learning for Medical Image Reconstruction*, 2020

Extending LOUPE for K-space Under-sampling Pattern Optimization in Multi-coil MRI. J Zhang, H Zhang, AQ Wang, QZ, MR Sabuncu, P Spincemille, TD Nguyen, Y Wang. *Machine Learning for Medical Image Reconstruction*, 2020

Deep-learning-based Optimization of the Under-sampling Pattern in MRI. CD Bahadir*, AQ Wang*, AV Dalca, MR Sabuncu. *IEEE Transactions on Computational Imaging*, 2020

Research and Work Experience

Google - Cloud AI Vision

2021

Software Research Intern

Sunnyvale, CA

- Designed algorithms for visual inspection, specifically anomaly detection and localization
- Used one-class classification deep neural network models.
- Improved performance by 5% overall, with up to 20% in specific settings.

MIT Lincoln Laboratory

2019

Research Intern

Boston, MA

- Developed deep learning algorithms for modeling coding and modulation in wireless communication channels

Amazon - AWS S3

2018

Software Development Intern

Seattle, WA

- o Designed a centralized database for S3 throttle rules using a NoSQL, eventually-consistent model
- o Implemented cross-platform web console for CRUD operations of database entries, using Spring Boot MVC framework for dependency injection, server-side scripting, and auto-wired components

Teaching

ECE 4250 - Digital Signal and Image Processing

2021

Teaching Assistant

Cornell University

- o Held office hours, answered online forum questions, and conducted recitations/lectures

CS 446 - Machine Learning

2019

Undergraduate Teaching Assistant

University of Illinois

- o Responsible for grading assignments and holding office hours

Awards

Microsoft PhD Fellowship Nominee 2021

MICCAI 2021 Student Travel Award

Cornell Fellowship Award

Technical Skills

Languages: Python, Java, C/C++

Frameworks: PyTorch, Keras, Tensorflow