Weikun Han

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Update: October 20, 2020

Education

2016-2018 **University of California Los Angeles, CA**
M.S. in Electrical and Computer Engineering
Advised by: Prof. Lei He

2011-2016 **Iowa State University, IA**
B.S. in Electrical Engineering
Advised by: Prof. Liang Dong

Experience

Jul. 2020 - present **Oregon State University, Corvallis, OR**
Research Assistant at CoRIS institute
Supervisor: Prof. Fuxin Li
I researched Deep Learning on 3D Point Clouds and proposed Superpixel PCNN to matches the same CNN performance in 2D images of a similar structure

Jan. 2020 - Jun. 2020 **Clobotics Global, Bellevue, WA**
Computer Vision Scientist and Machine Learning Engineer II
- I researched the Fine-Grained Image Classification task to improve model performance in classifying thousands of indistinguishable retail goods
- I implemented an Active Learning pipeline for the Machine Learning system that enables interactively query human to label necessary training data
- I collaborated with the team to design and develop the Data Operations platform that enables non-technical persons to operate the Machine Learning system

Oct. 2018 - Jan. 2020 *Computer Vision Scientist and Machine Learning Engineer*
- I researched the Object Detection task to improve model performance on many disorganized product display scenes in the offline retail market
- I implemented an Image Retrieval system to speed up data collection that reduces the model iteration period from a month to days after launching new products
- I collaborated with the team to design and develop a Product Search website that enables people can retrieve new products in streaming data

Aug. 2018 - Oct. 2020 *Research Intern*
I researched the Image Clustering task to design and develop an Image Retrieval system that can discover new products in the market

Mar. 2018 - Jul. 2018 **University of California Los Angeles, CA**
Graduate Research Assistant at VCLA lab
Supervisor: Prof. Song-Chun Zhu
I researched Deep Learning Acceleration and Compression to reduce model computation cost and storage size without regression in model performance

Dec. 2016 - Mar. 2018	*Graduate Research Assistant at Design Automation Laboratory* *Supervisor: Prof. Lei He* • I researched Adversarial Deep Learning to design and develop the Voice Autoencoder to estimate uncertainty and improve robustness • I worked on Embedded Software Validation to design and develop a framework into the symbolic execution tool using the LLVM compiler
	Iowa State University, IA
Jun. 2014 - May 2016	*Undergraduate Research Assistant at Laboratory for MEMS and Biochip* *Supervisor: Prof. Liang Dong* • I researched Nanotechnology to design, manufacture, and test nano-scale structures devices by operating micro-fabrication laboratory equipment • I co-authored three publications in major journals and two publications in major conferences, and one paper got the best student paper award

Awards and Honors

2017 **Best Student Paper Award**
The 17th IEEE International Conference on Nanotechnology

2015 **Magna Cum Laude Honor**
Iowa State University
Ranked 1 st in a class of 2015 Electrical Engineering graduates (Winter)

2013 - 2015 **Dean's List Honor**
Iowa State University
Given to top ranked students

Publications

Journal Publications

[1] Q. Wang, W. Han, Y. Wang, M. Lu, and L. Dong, "Tape nanolithography: a rapid and simple method for fabricating flexible, wearable nanophotonic devices," *Microsystems and Nanengineering*, 4, 31 (2018)

[2] Y. Wang, L. Liu, Q. Wang, W. Han, M. Lu and L. Dong , "Strain-tunable plasmonic crystal using elevated nanodisks with polarization-dependent characteristics," *Applied Physics Letters*, 108, 071110 (2016)

[3] Q. Wang, W. Han, P. Liu, L Dong , "Electrically tunable quasi-3-D mushroom plasmonic crystal," *Journal of Lightwave Technology*, 34, 2175-2181 (2016)

Conference Publications

[4] Q. Wang, W. Han, Y. Wang, M. Lu and L. Dong, "Tape-based flexible metallic and dielectric nanophotonic devices and metamaterials," *2017 IEEE 17th International Conference on Nanotechnology (IEEE-NANO)*

[5] Y. Wang, L. Liu, Q. Wang, W. Han, M. Lu and L. Dong, "Strain-tunable two-dimensional plasmonic crystals," *2015 Photonics Conference (IPC)*

Teaching

Iowa State University, IA
Fall 2014 *Teacher Assistant, EE 224: Signals and Systems I*
Enrollment: 40