Weikun Han

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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

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

Clobotics Global, Bellevue, WA

JAN. 2020 - JUN. 2020

JUL. 2020 - PRESENT

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 Ceiling Analysis dashboards for the Machine Learning system that enables real-time model performance monitoring
- 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

University of California Los Angeles, CA

MAR. 2018 - JUN. 2018

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

SEP. 2016 - SEP. 2017

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

AUG. 2013 - APR. 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, <u>W. Han</u>, 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, <u>W. Han</u>, 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, <u>W. Han</u>, 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, <u>W. Han</u>, 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, <u>W. Han</u>, 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