Zifeng Wang

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Education & Honors

Northeastern University Boston, MA

PhD student in Machine Learning Sep 2018 – Present

- Dean's Fellowship (Highest honer granted to new PhD students)

Tsinghua University Beijing, China

B.S. degree in Electronic Engineering, GPA 92/100 (Ranking:12/233) July 2018

- Evergrande Scholarship in Tsinghua (For top 5% students)
- China Scholarship Council Outstanding Undergraduate Students Scholarship (For top 5% students)
- First Prize in Beijing Undergraduate Physics Competition

Northeastern University Boston, MA

Study abroad coursework in Electrical and Computer Engineering Sep 2016 – Dec 2016

- GPA: 3.92/4.00

Lab Experience

Northeastern University Boston,MA

Research Assistant; Advisor: Jennifer Dy Sep 2018 – Present

COPD Analysis

- Analyzing data of patient who has chronic obstructive pulmonary disease
- Using deep learning model to extract feature of RNA sequences

Northeastern University Boston,MA

Research Assistant; Advisor: Jennifer Dy, Stratis Ioannidis Sep 2018 – Present

Large Scale Radio Signal Identification

- Identifying signals from 10k devices
- Constructed a unified framework for convenient modeling
- Set up baseline results by transfer learning

Tsinghua University Beijing, China

Research Assistant; Advisor: Jin Wang Feb 2018 – June 2018

Unmanned Aerial Vehicle Tracking

- Tracked UAVs in extremly low resolution with high speed
- Combined siamese neural network with hourglass network
- Created automated framework for tracking, which is energy saving and robust to noise
- Finished graduate thesis paper

Tsinghua University Beijing, China

Research Assistant; Advisor: Jiwen Lu June 2017 – Nov 2017

Multi-object Tracking

- Tracked people in video clips using a deep reinforcement learning approach and created decision-making network for tracking trained by policy gradient
- Combined deep neural network with motion prediction
- Paper accepted for ECCV 2018, *Collaborative Deep Reinforcement Learning for Multi-Object Tracking*

University of Michigan Ann Arbor, Michigan

Research Assistant; Advisor: Jia Deng July 2017 – Sep 2017

Instance Level Segmentation

- Used end-to-end Hourglass model to instance segmentation problem
- Innovated balanced training approach and modified network to detect small objects
- Achieved comparable results with FAIRCNN on MSCOCO dataset, with good performance (surpassed mainstram methods when IoU = 0.7) on PASCAL-VOC dataset

Tsinghua University Beijing, China

Research Assistant; Advisor: Shengjin Wang Feb 2017 – June 2017

Palm Print Recognition System

- Identified an individual by reading palm prints by designing pipeline(image pre-processing, palm print extraction, position adjustment, feature extraction, similarity calculation) for the system
- Used scattering networks and CNN to execute feature extraction

Tsinghua University Beijing, China

Research Assistant; Advisor: Yong Li Sep 2015 – Jul 2016

Big Data Mining for Social Networks

- Researched big data mining and user behavior of online shopping customers
- Used Hadoop to analyze data and co-cluster to analyze correlation between customers and target items
- Coauthored *Profiling Users by Online Shopping Behaviors*, published on *Multimedia Tools and Applications*

PUBLICATIONS

- Ren, Liangliang, Jiwen Lu, **Zifeng Wang**, Qi Tian, and Jie Zhou. "Collaborative Deep Reinforcement Learning for Multi-Object Tracking." In Proceedings of the European Conference on Computer Vision (ECCV), pp. 586-602. 2018.
- Yan, Huan, **Zifeng Wang**, Tzu-Heng Lin, Yong Li, and Depeng Jin. "Profiling users by online shopping behaviors." Multimedia Tools and Applications (2017): 1-11.

SKILLS

- Theory: Machine Learning, Computer Vision
- Development: Proficient in C/C++, Java, MATLAB, Python; Experience with HTML, Verilog
- Deep Learning Frameworks: Caffe, Tensorflow, PyTorch