Jinxin Zhou

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Education Background

University of Michigan **Ann Arbor, MI**

Master of Science in Electrical & Computer Engineering-Computer Vision Aug. 2019 – Now

GPA: 4.0/4.0

Huazhong University of Science and Technology (HUST) **Wuhan, China**

Bachelor of Engineering in Electrical Engineering and Automation Sep. 2015 – Jun. 2019

GPA: 3.88/4.0

Courses: Deep learning for computer vision, Computational Data Science and Machine Learning, Foundation of computer vision, Reinforcement Learning Theory, Ecological Approach to Vision, Data structure,, Signal Analysis, Probability and Random Process.

Academic Research

Research Assistant | Detect abnormal pattern of Bone cancer based on GAN | **UMICH Ann Arbor,MI**

Advisor: Prof. Chuan Zhou **Feb.2020-May.2020**

➢ Investigated and implemented all current GAN-based models for the purpose of anomaly detection in a unsupervised one-shot way .

➢ Incorporated Cycle-consistency to ensure instance consistence and introduced a novel re-designed methods to prevent leaking information during testing.

➢ Speeded up the inference time about 30× times compared with AnoGAN and Improved the semantic meaning of reconstructed images.

Research Assistant | Target and track of sky objects based on deep learning| **HUST Wuhan, China**

Advisor: Prof. Jie Ma **June.2018- Jan.2019**

➢ Designed a new network system based on Siamese-RPN Network to target and track sky objects in a video.

➢ Through introducing anchors and RPN network, the tracking box become more accurate and the speed is improved from 45.65 fps to 69.8fps, compared with Siamese-FC.

➢ Improved the performance of Siamese-RPN Network in small and fast change in scale sky objects.

Research Assistant | Neural Network based on FPGA | **HUST Wuhan, China**

Advisor: Prof. Zhenyan Wang **Apr.2016- Apr.2017**

➢ Leading a team of three students to systematically learn the neural network model and FPGA

➢ Built the Convolutional Neural Network on FPGA to implement keyword detection and classify the numbers 0-9; this can produce more sophisticated neural network calculations when computing resources are limited

➢ Built Recurrent Neural Network on FPGA to detect trigger words.

Course Project

EECS 504: | SiamPolarMask: Unifyinng Object Tracking and Segmentation | **UMICH Ann Arbor,MI**

Advisor: Prof. Andrew Owens **May.2020**

- Decomposed the object tracking task into two sub-problems as classification for pixel category and instance segmentation by polar representation.
- Came up with a new model called SiamPolarMask for object tracking and segmentation in an anchor-free way.

EECS 598: | Reconstruction-Driven Curiosity | **UMICH Ann Arbor,MI**

Advisor: Prof. David Fouhey **May.2020**

- Implemented a new curiosity-related reward focusing on compressing images in a way that allows accurate reconstruction.
- This methods is more intuitive with respect to visual understanding which is able to encode raw images into a compact representation while maintaining sufficient information of proper reconstruction.
- Achieved comparable results on Montenzuma's Revenge and Venture with RND.

Awards & Honors

- Academic Excellence Scholarship, HUST (top 10% among 400 students) 11/2018
- Wuhan Longcheng Electric Scholarship, Wuhan Longcheng Electric Co. Ltd. (top 10% among 400 students) 05/2018
- Academic Excellence Scholarship, HUST (top 10% among 400 students) 11/2017
- Social Public Welfare Scholarship, HUST 11/2017
- Shanghai Siyuan Electric Scholarship, Shanghai Siyuan Electric Co. Ltd. (top 10% among 400 students) 05/2017
- Scholarship for Self-improvement College Students Model, HUST 03/2017

Computer skills

Language: **C/C++, Matlab, Python, Pytorch, Julia**
Markup: **Latex**
Environment: **Linux**