KUNYI LU

Apt 2B, 2421 Lancashire Dr, Ann Arbor, MI, 48105
734-7737646 ⋄ lukunyi@umich.edu ⋄ www.linkedin.com/in/kunyilu

SUMMARY

A second year Master student with 4 years experience in machine learning and computer vision
Proficient in Python and computer vision/machine learning toolkit, such as OpenCV, TensorFlow, PyTorch and so on
Interested in computer vision, natural language processing and machine learning

EDUCATION

Master of Science in Electrical & Computer Engineering September 2017 - May 2019
University of Michigan, Major: Machine Learning, GPA: 3.92/4.0
Related Courses: Computer Vision(A+), Natural Language Processing(A+)

Bachelor of Science in Electronic & Computer Engineering September 2013 - June 2017
Wuhan University, GPA: 3.83/4.0, Ranking: top 5%
Related Courses: Programming fundamentals, Object-Oriented Programming, Computer Networks

WORK EXPERIENCE

Video Understanding for City Security February 2018 - August 2018
Computer Vision Software Engineer Intern *Voxel51, LLC, Ann Arbor, MI*

· Implemented a powerful system for tracking multiple objects using machine learning models that achieves a high accuracy above 90% in average
· Generated a dataset for pedestrian action recognition and trained micro-action classifiers(machine learning models) on the dataset
· Developed a FashionSense pipeline that can detect and track fashion clothes/accessories in movies
· Developed a PersonSense pipeline that can detect, track pedestrians and recognize their action
· Collaboratively developed a VehicleSense pipeline that can detect, track vehicles and recognize their color, make and model

RESEARCH EXPERIENCE

Temporally-Aware Interpolation Network for Video Frame Inpainting September 2018 - Current
Research Assistant *Vision and Robotics Lab, University of Michigan*
Advisor: Jason J.Corso

· Implementing a novel deep network for video frame inpainting which generates more accurate and visually pleasing predictions than multiple strong baselines
· Designed multiple experiments to demonstrate our model's ability to perform well on complex videos depicting challenging scenes and a wide variety of actions

Local Feature Matching December 2016 - June 2017
Research Assistant *Multi Spectral Vision Processing Lab, Wuhan University*
Advisor: Jiayi Ma

· Proposed an efficient algorithm for establishing robust point correspondences between two sets of points
· Improved feature matching accuracy compared with SIFT by reducing outliers

HandWritten Character Recognition on Express Sheet Information May 2015 - September 2016
Research Assistant & National Project Team Leader *DSP Lab, Wuhan University*
Advisor: Dexiang Deng

· Led a 5-members team to develop an Android APP that can identify the handwritten phone number on express sheet and notify the receiver to take delivery by sending message automatically
· Took responsibility to implement and improve handwritten character recognition by using CNN+SVM trained on MNIST

PUBLICATIONS AND PATENTS

[1] Ryan Szeto, Ximeng Sun, **Kunyi Lu**, Jason J.Corso, "A Temporally-Aware Interpolation Network for Video Frame Inpainting", *IEEE TRANSACTIONS ON PATTERN ANALYSIS AND MACHINE INTELLIGENCE* (submitted)
[2] **Kunyi Lu**, Yuting Chen, Xinjue Hu, Xiaoqiao Chen, "*An Express Scanner*", Chinese Patent for utility model, Nr. ZL 2016 2 0302472.7
[3] Yuting Chen, **Kunyi Lu**, Yanyu Qu, Xiaoqiao Chen, "*An Intelligent Express Box with Multi-functional Scanner*", Chinese Patent for utility model, Nr. ZL 2016 2 0297570.6

TECHNICAL SKILLS

Development Language: Python, C/C++, Julia, Shell Scripting, Matlab, HTML, JavaScript
Operating Systems: Linux/Unix, Windows
Computer Vision Tools: OpenCV, TensorFlow, PyTorch, CUDA