WENYUAN, LI

(Seeking Machine Learning Intern in 2019 Summer)

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EDUCATION BACKGROUND

University of California, Los Angeles, USA
Ph.D Candidate in Electrical and Computer Engineering *(Expected June 2020)*
●Medical Image Informatics Group (MII)
●GPA(until now): 3.94/4.00 *July 2017 – Present*

M.S. in Electrical Engineering (June 2016)
M.S. minor in Statistics (June 2017)

Zhejiang University, P.R.China *September 2010 - June 2014*
B.S. in Optical Engineering
●Honored Minor: Advanced Honor Class of Engineering Education (ACEE)
●Ranking: 3/115 GPA: 90.8/100 3.96/4.00

SELECTED HONORS AND AWARDS

● Electrical Engineering Department Fellowship, UCLA, 2014
● Chiang Chen Overseas Fellowship (10 students major in engineering field from top universities in China), 2014
● National Scholarship in China (top 2%), 2013
● Cross-disciplinary Scholars in Science and Technology, UCLA, 2013

SELECTED RESEARCH EXPERIENCE

Medical image segmentation based on multitask learning *(11/17-06/18)*
We design a two-branch deep learning "Path R-CNN" architecture which decouple the classification and segmentation task. Region proposal network inspired by Mask R-CNN was later added to our model. The new architecture boosts the segmentation performance around 5% in mIOU.
Li, W., *et al. "Path R-CNN for prostate cancer diagnosis and Gleason grading of histological images." (Paper under review by IEEE Transaction on Medical Imaging)*
Li, W., *et al. "Towards accurate and efficient cancer diagnosis using histological images." GRC: Advanced Health Informatics, 2018 Oral presentation.*

Collective neural dynamics: for better mental disease prediction and faster neuromorphic computing *(06/15-09/17)*
Design and emulate neural dynamics on Neuromorphic Circuits – Spikey; a brain phase diagram was constructed for achieving better mental disease prediction and faster neuromorphic computing.
Li, W., *et al. "A basic phase diagram of neuronal dynamics." Neural computation 30.9 (2018): 2418-2438.*
Li, W., *et al. "A neuronal dynamics study on a neuromorphic chip." Neuro Inspired Computational Elements (NICE) 2017 Oral presentation.*

Skyrmion tracking by optical flow method *(12/14-04/15)*
Matlab programing to track Skyrmion moving using optical flow algorithm.
Yu, G., Upadhyaya, P., Li, X., ***Li, W.,*** *et al. "Room-temperature creation and spin-orbit torque-induced manipulation of skyrmions in thin film." Nano letters 16.3 (2016): 1981-1988.*

INTERN EXPERIENCE

IQVIA: Machine Learning Research Intern *(07/18-09/18)*
Worked on developing a semi-supervised rare disease detection framework using a generative adversarial network (GAN). The model performance beats common classifier (logistic regression, neural network, and random forest) by 5% in terms of precision-recall AUC score.
Manuscript for NIPS 2018 ML4h workshop is in preparation.

UCLA-CSST Research Intern *(07/13-09/13)*
Developed an automated Hall Measurement System for semi-conductors. The system measures material mobility and conductivity simultaneously.

COURSE PROJECT

Hand written digital recognition based on Newton and MM
Newton, quasi-newton and MM algorithm were implemented in *R* with a comprehensive comparison.

Seizure detection using SVM based on EEG signal
SVM algorithm was applied and 99% accuracy was achieved on CHB-MIT data base.

SKILLS

Programing: python, tensorflow, scikit-learn, java, c++, matlab, labview

CONTACT

Lab Page: https://www.mii.ucla.edu/people/wyli/ **LinkedIn:** https://www.linkedin.com/in/wen-yuan-li-ucla/
Homepage: https://wenyuan-vincent-li.github.io/ **GitHub:** https://github.com/Wenyuan-Vincent-Li