# LI, WENYUAN

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# **EDUCATION**

#### University of California, Los Angeles, USA

Ph.D in Electrical and Computer Engineering GPA: 4.00/4.00

M.S. in Electrical Engineering (2016) GPA: 3.93/4.00

#### Zhejiang University, P.R.China

B.S. in Information Engineering (2014) GPA: 3.96/4.00

# <u>Skills</u>

- Machine Learning: CNN, GAN, R-CNN, SVM, XGBoost, Random forest, Logistic Regression, etc.
- Data Processing: Dimension Reduction, Pandas, OpenCV, etc.
- Programming: Python, Tensorflow, Pytorch, Scikit-learn, Java, C++, Matlab, etc.

# SELECTED RESEARCH AND WORK EXPERIENCE

#### Facebook: Software Engineer Intern (06/24/19-09/13/19)

- Work with billion post-click data to improve user's search experience in Facebook app.
- Develop a search ranking model based on social, personalization and text relevance signals.
- Deploy the most advanced click-through rate model with text relevance signals embedded in the model.
- ROC-AUC is improved by 2% evaluated on 10 million data.

# **IQVIA: Machine Learning Research Intern** (07/02/18-09/21/18)

- Develop a semi-supervised rare disease detection framework using generative adversarial networks.
- Leverage a large amount of un-labeled data (1.5 million patient records).
- Precision-recall AUC score beats common classifier (logistic regression, random forest, etc) by 5%.
- Develop a flask-based API using the trained model.

#### Medical image segmentation based on multitask learning (11/01/17-06/30/18)

- Design a two-branch deep learning "Path R-CNN" architecture based on R-CNN.
- Model decouples the classification and segmentation task and modified to depress false positive rate.
- The new architecture boosts the segmentation performance by 7% compared to the state-of-the-art U-Net.

# SELECTED PUBLICATIONS

- Li W, Wang Z, Yue Y, Li J, Zhou M, Speier W, Arnold C. Semi-supervised learning using good and bad samples. *Machine Vision and Applications 31.6 (2020): 1-11.*
- Li W, Wang Z, Li J, Polson J, Speier W, Arnold C. Semi-supervised learning based on generative adversarial network: a comparison between good GAN and bad GAN approach. *CVPR 2019 LID Workshop. 2019 May 16.*
- Li W, Wang Y, Cai Y, Arnold C, Zhao E, Yuan Y. Semi-supervised rare disease detection using generative adversarial network. *NeurIPS 2018 ML4H Workshop. 2018 Dec 3.*
- Li W, Li J, Sarma KV, Ho KC, Shen S, Knudsen BS, Gertych A, Arnold CW. Path R-CNN for Prostate Cancer Diagnosis and Gleason Grading of Histological Images. *IEEE transactions on medical imaging*. 2018 Oct 12.
- Li W, Ovchinnikov IV, Chen H, Wang Z, Lee A, Lee H, Cepeda C, Schwartz RN, Meier K, Wang KL. A Brain Phase Diagram of Neuronal Dynamics. *Neural computation. 2018 Jun 12:1-21.*

# SELECTED HONORS AND AWARDS

- PANDA: Best Presentation Runner-up, MICCAI, 2020
- Electrical Engineering Department Fellowship, UCLA, 2014
- Chiang Chen Overseas Fellowship, 2014
- National Scholarship in China (top 2%), 2013