

Bingyuan Liu

RESEARCHER AND ENGINEER · DEEP LEARNING AND COMPUTER VISION

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Summary

Current Research Associate at ETS Montreal, Canada. Well-balanced academia and industry experience for more than 10 years. Research interests include deep learning, computer vision and medical imaging. 10+ published papers in the related conferences and journals, e.g., CVPR, ACCV, CVIU, etc. Also interested in applying the advanced technologies in challenging real products and environments.

Work Experience

ETS Montreal

Montreal, Canada

RESEARCH ASSOCIATE

Nov. 2020 - Present

- Research areas includes deep learning, computer vision and medical imaging.
- Responsible for providing deep learning based solutions for eye disease screening, with our industrial partner, Diagnos, Inc.
- Working with Prof. Ismail Ben Ayed and Prof. Jose Dolz.

Coohom, Inc. (Kujiale.com)

Hangzhou, China

ALGORITHM EXPERT & TECH LEAD OF COMPUTER VISION TEAM

May. 2018 - Mar. 2020

- Lead the computer vision team from zero, which provided offline and online services for the 3D interior design product.
- Responsible for the perception system of KuAiDesign, an AI assisted 3D interior design product.

Qihoo 360, Co. Ltd.

Beijing, China

MACHINE LEARNING ENGINEER

Aug. 2017 - Apr. 2018

- Responsible for recommendation algorithms applied in Huajiao (a live streaming app with millions of daily active users).

Alibaba Group, Inc.

Hangzhou, China

SENIOR ALGORITHM ENGINEER

Apr. 2016 - Aug. 2017

- Responsible for OCR (Optical Character Recognition) algorithms, recognizing Chinese business license, business card, bank card, etc.
- Responsible for object detection algorithms provided on the machine learning platform PAI on Alibaba Cloud.

Huawei Technologies, Co. Ltd.

Nanjing, China

SOFTWARE ENGINEER

Jul. 2015 - Apr. 2016

- Responsible for applied deep learning algorithms, supporting real applications in business partner like China Mobile.

Education

Institute of Automation, Chinese Academy of Sciences

Beijing, China

PH.D. IN DEEP LEARNING AND COMPUTER VISION

Sep. 2010 - Jun. 2015

- Supervisors : Prof. Hanqing Lu and Prof. Jing Liu
- Got the scholarship awarded to the top 1% students.

Zhejiang University

Hangzhou, China

B.S. IN INFORMATION SCIENCE AND COMMUNICATION ENGINEERING

Sep. 2006 - Jul. 2010

- Rank: 25/210 GPA: 4.29/5.0
- Excellent graduate award

Selected Publications

- Bingyuan Liu, Ismail Ben Ayed, Adrian Galdan, Jose Dolz: **The Devil is in the Margin: Margin-based Label Smoothing for Network Calibration.** CVPR, 2022.
- Bingyuan Liu, Christian Desrosiers, Ismail Ben Ayed, Jose Dolz: **Mixed-supervised segmentation: Confidence maximization helps knowledge distillation.** arxiv, 2021. (Major revision in MedIA)
- Bingyuan Liu, Jose Dolz, Adrian Galdan, Riadh Kobbi, Ismail Ben Ayed: **The hidden label-marginal biases of segmentation losses.** arxiv, 2021. (under review)
- Bingyuan Liu, Jiantao Zhang, Xiaoting Zhang, Wei Zhang, Chuanhui Yu, Yuan Zhou: **Furnishing Your Room by What You See: An End-to-End Furniture Set Retrieval Framework with Rich Annotated Benchmark Dataset.** arXiv, 2019.
- Bingyuan Liu, Jing Liu, Jinqiao Wang, Hanqing Lu: **Learning a Representative and Discriminative Part Model with Deep Convolutional Features for Scene Recognition.** ACCV, 2014.