

Bingyuan Liu

RESEARCHER AND ENGINEER · DEEP LEARNING AND COMPUTER VISION

☎ (+1) 514-562-7368 | ✉ liubingyuan1988@gmail.com | 🏠 by-liu.github.io

Summary

I am a Research Associate at École de technologie supérieure (ETS), Canada. My research interests include deep learning, computer vision and medical imaging. I have well-balanced academia and industry experience for more than 10 years, with 10+ published papers in the related conferences and journals, e.g., CVPR, CVIU, ACCV, etc, and experience of designing and developing enterprise-level applications, such as image retrieval and optical character recognition (OCR).

Work Experience

École de technologie supérieure (ETS)

Montreal, Canada

RESEARCH ASSOCIATE

Nov. 2020 - Present

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

Coohom, Inc.

Hangzhou, China

ALGORITHM EXPERT ENGINEER (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 interior design product, coohom.com.
- 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).

Alibaba Group, Inc.

Hangzhou, China

SENIOR ALGORITHM ENGINEER

Apr. 2016 - Aug. 2017

- Responsible for optical character recognition (OCR) algorithms, applied in parsing business license, business card, bank card, etc.
- Responsible for object detection algorithms provided on the machine learning platform on Alibaba Cloud.

Huawei Technologies, Co. Ltd.

Nanjing, China

SOFTWARE ENGINEER

Jul. 2015 - Apr. 2016

- Responsible for applied machine learning algorithms, supporting 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 national 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 Galdran, 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 Galdran, 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.