Bingyuan **Liu**

RESEARCHER AND ENGINEER · DEEP LEARNING AND COMPUTER VISION

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

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 image retrieval project from zero, which provided offline and online services for the interior design product.
- Responsible for the perception system in the AI assisted interior design platform.

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 National Scholarship which was awarded to the top 1% students in China.

Zhejiang University *Hangzhou, China*
B.S. IN INFORMATION SCIENCE AND COMMUNICATION ENGINEERING *Sep. 2006 - Jul. 2010*
- Rank: 25/210   GPA: 4.29/5.0
- Outstanding 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. (Minor 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.