

# Lingyun Yang (杨凌云)

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Personal profile      Ph.D. Student

Department of Computer Science and Engineering  
Hong Kong University of Science and Technology  
Clear Water Bay, Kowloon, Hong Kong

Research interests      Cloud Computing, Machine Learning for Systems, Resource Management for Large-Scale GPU Clusters

Education      **Hong Kong University of Science and Technology (HKUST)**

*Department of Computer Science and Engineering*

Ph.D. in Computer Science and Engineering      2020 – Present

◊ Advisor: [Prof. Wei Wang](#)

**South China University of Technology (SCUT)**

*School of Computer Science and Engineering*

B.Eng. in Computer Science and Technology      2016 – 2020

◊ Studied at All-English Innovation Class (*GPA: 3.82/4*)

Professional experience      **Alibaba Group**      Hangzhou, China

*Research Intern*, Cluster Management Group      Dec. 2020 - Present

◊ Mentors: Jian He and Dr. Yinghao Yu

◊ In combination with GPU virtualization technology (vGPU), developed the local agent and centralized resource ledgers for managing heterogeneous GPU resources, supported to co-locate thousands of GPU jobs of different priorities (e.g., latency-sensitive (LS), best-effort (BE)) through dynamically provisioning of GPU computing power and memory, thus significantly improving the resource utilization of large-scale GPU clusters.

◊ Co-developed Morphling, an open-source auto-configuration framework for machine learning model serving on Kubernetes, with intelligent algorithms to quickly find the optimal configuration. [[paper](#)][[code](#)][[website](#)]

**Microsoft Research Asia (MSRA)**

Beijing, China

*Research Intern*, Innovation Engineering Group (IEG)

Jul. 2019 - Jun. 2020

◊ Mentors: Lewei Lu and Chong Li

◊ Applied multiple latest attention mechanisms to face recognition models, integrated with knowledge distillation, built in CNTK.

◊ Built a neural architecture search pipeline for face recognition tasks.

	◇ Designed a symmetric padding pooling layer with self-attention which can be easily integrated into any model structure, achieve the state-of-the-art performance and improve the robustness to various perturbations.	
Publications	◇ Luping Wang*, <b>Lingyun Yang*</b> , Yinghao Yu, Wei Wang, Bo Li, Xianchao Sun, Jian He, and Liping Zhang, “Morphling: Fast, Near-Optimal Auto-Configuration for Cloud-Native Model Serving”, to appear in the <i>Proceedings of ACM Symposium on Cloud Computing (SoCC ’ 21)</i> , Seattle, WA, November 2021. (*Co-first authors in alphabetical order)	
Honors and scholarships	◇ Postgraduate Scholarship 2020 - Present, HKUST ◇ Star of Tomorrow Internship Award of Excellence Jul. 2020, MSRA ◇ Merit Student & Excellent Student Cadre Nov. 2019, SCUT ◇ National Scholarship Oct. 2019, China ◇ Silver Medal, 2019 ICPC China Xi’an National Invitational Programming Contest May 2019 ◇ First Prize, 17th Guangdong Collegiate Programming Contest May 2019 ◇ Silver Medal, 2019 Sanqi Mutual Entertainment Cup Apr. 2019 ◇ Gold Medal, 2019 South China University of Technology ACM Programming Contest Apr. 2019 ◇ Bronze Medal, 2018 ACM-ICPC Asia Xuzhou Regional Contest Oct. 2018 ◇ Silver Medal, 1st Xiao Mi Collegiate Programming Contest Sept. 2018 ◇ Gold Medal, 2018 South China University of Technology ACM Programming Contest Apr. 2018 ◇ The First Prize Scholarship Nov. 2017, SCUT ◇ Bronze Medal, 2017 ACM-ICPC Asia Xian Regional Contest Oct. 2017 ◇ Gold Medal, 12th China Youth Robot Competition Jul. 2012 ◇ Champion, 2012 RoboCup Youth Robot World Cup China Mar. 2012 Division Selection Competition	
Teaching activities	<b>Hong Kong University of Science and Technology</b> Kowloon, Hong Kong <i>Teaching Assistant, Department of Computer Science and Engineering</i>	Clear Water Bay, Spring 2022 Fall 2021 Spring 2021
Other experience	<b>ACM-ICPC Competition Group</b> <i>Group Member &amp; Team Leader</i> ◇ Coach: <u>Prof. Chuhua Xian</u> ◇ Major domains: Dynamic Programming, Number Theory, Data Structure, etc. <b>Machine Learning &amp; Cybernetics Research Group</b> <i>Undergraduate Research Assistant</i>	2016 - 2019 2017 - 2019

- ◊ Advisor: Prof. Patrick Chan
- ◊ Completed research projects: Fundus Stitching, Tableware Recognition and NN Visualization.

### **Tencent Innovation Club**

*Vice Chairman*

2018 - 2019

- ◊ Led the largest student club at the School of Computer Science and Engineering in SCUT, sponsored by Tencent Technology (Shenzhen) CO., LTD.

### **ByteDance Summer Camp**

Beijing, China

*Camper*, Algorithm track

Aug. 2019

- ◊ Mentor: Dr. Yibo Zhu
- ◊ Totally 150 participants selected from more than 6k candidates.
- ◊ Trained a large scale BERT Model by using Pipeline and Model Parallelism.

### **ICMLC & ICWAPR**

Chengdu, China

*Student helper*

Jul. 2018

## **Skills**

Programming Languages: C++, Python, Golang  
 Toolkits: Git,  $\LaTeX$ , Linux Shell, Qt, MySQL, Markdown  
 Languages: English (fluent), Mandarin (Native speaker)

## **Miscellaneous**

Read various kinds of books, watch movies, play basketball & badminton, workout at the gym, food lover.  
 In my spare time, I also write some blogs about interesting stuffs aperiodically.  
 Here is my personal blog (in Chinese): <https://blog.yanglingyun.me/>.