

# LIANG, Kunchangtai

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Homepage: lkct.github.io

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## SKILLS

- **Python**: majority of past experience, including packaging
- **PyTorch**: experience in Deep Learning, contribution (bug-fix) to PyTorch repository
- **C/C++**: used in project and school, TA experience
- **Computer Vision**: project experience, BSc Thesis
- **Robotics**: project experience

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## ENGLISH PROFICIENCY

<b>TOEFL iBT</b> : 104 (R30, L26, S23, W25)	10/2019
<b>GRE</b> : 324 + 4.0 (V154, Q170, AW4.0)	05/2019
<b>CET6</b> : 611	06/2017
<b>CET4</b> : 669	12/2016

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## EDUCATION

**Master's student, University of Edinburgh** 09/2021 – Present

**School**: School of Informatics

**Major**: Computer Science

**Bachelor of Science, Peking University** 09/2016 – 07/2020

**School**: School of Electronics Engineering and Computer Science

**Major**: Intelligence Science and Technology

**GPA**: 3.572 / 4.0

**Thesis**: Research on Local Feature Extraction and Video Coding for Machines  
Based on Neural Networks

**Grade**: A

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## RESEARCH & WORKING EXPERIENCE

**Core Researcher (Intern), iFLYTEK Co., Ltd.** 08/2020 – 08/2021

**Research focus**: Optical Character Recognition and Scene Text Detection

- Designing algorithms for accurate Scene Text Detection
- Improving commercially deployed OCR models to reduce errors in output
- Participating in ICDAR 2021 Competition on Scientific Literature Parsing
  - 2<sup>nd</sup> place in Document Layout Recognition, major contribution

**Undergraduate Intern, STRUCT Group, PKU**

09/2017 – 06/2020

**Research focus:** Video understanding

- Contributing to data verification and baseline experiments on human action dataset PKU-MMD v2
- Collaborating on a Video Coding for Machines (VCM) algorithm based on skeleton-based human action
- Designing neural networks for local feature extraction on images

**Research Intern, Peng Cheng Laboratory**

07/2019 – 08/2019

**Research focus:** Remote Operated Vehicle control

- Aligning eye movement of human operator to ROV camera
- Designing underwater detection algorithms guided by the focus of human eye
- Constructing an end-to-end visual-servo framework based on eye-guidance

**Teaching Assistant, PKU**

09/2017 – 01/2018

**Course:** Introduction to Computation (A), PKU 04830041

Recruited as undergraduate TA because of 100/100 grade earned 01/2017

- Holding Q/A in practice sessions
- Grading coursework (weekly assignments and major project)
- Invigilating mid-term and final exams

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**PUBLICATIONS**

- Sifeng Xia\*, **Kunchangtai Liang\***, Wenhan Yang, Ling-Yu Duan, and Jiaying Liu. "An Emerging Coding Paradigm VCM: A Scalable Coding Approach Beyond Feature and Signal," IEEE International Conference on Multimedia and Expo (ICME), 2020. (\*Equal contribution)
- **Kunchangtai Liang**, Dezhao Wang, Yuzhang Hu, Sifeng Xia, Wenhan Yang, and Jiaying Liu, "AI M1243: Local Feature Point Detector based on CNN," 10<sup>th</sup> Meeting of Artificial Intelligence Industry Technology Innovation Strategic Alliance, 2020.

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**AWARDS AND HONORS**

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|---|---------|
| • Award for Scientific Research, PKU  | 12/2018 |
| • Award for Community or Public Service, PKU                                  | 12/2017 |
| • Third prize, Schlumberger Cup programming competition, PKU                  | 06/2017 |
| • Mayor's Award for Adolescents Science & Technology Innovation, Hefei        | 11/2014 |
| • Third prize, 14 <sup>th</sup> Awarding Program for Future Scientists, China | 10/2014 |

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**EXTRACURRICULAR ACTIVITIES**

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| • Volunteer in PKU Admission Group, Anhui                | 07/2021           |
|  | 07/2017           |
| • Volunteer in Youth Volunteers Association of EECS, PKU | 09/2016 – 11/2019 |
| • Deputy secretary general                               | 11/2018 – 11/2019 |
| • Member of EECS baseball team                           | 09/2016 – 08/2018 |