# SIZHE LI

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https://sizhelee.github.io/

## EDUCATION

**Department of Engineering, University of Cambridge**  Cambridge, UK
MPhil in **Machine Learning and Machine Intelligence**  Oct. 2024-Aug. 2025 (Expected)

**School of Electronics Engineering and Computer Science, Peking University**  Beijing, CHINA
Bachelor of Science in **Computer Science and Technology**  Sep. 2019-Jun. 2023
**GPA:** 87.5/100 (Advance GPA: 89.5/100)

## AWARDS

**2022** School-level Merit Student of Peking University 10%
**2022** JIUKUN Scholarship of Peking University 4%
**2023** Outstanding Graduate of Peking University 15%
**2023** Wang Xuan Scholarship of Peking University 3%
**2023** Peking University Outstanding Undergraduate Graduation Thesis

## PUBLICATIONS

**05/2024 ASAC: A Benchmark for Algorithm Synthesis**
Zhao Zhang, Yican Sun, Ruyi Ji, Siyuan Li, Xuanyu Peng, Zhechong Huang, **Sizhe Li**, Tianran Zhu, Yingfei Xiong
Published on FSE 2024 (ACM International Conference on the Foundations of Software Engineering)
https://dl.acm.org/doi/pdf/10.1145/3663529.3663802

**03/2024 Diff-BGM: A Diffusion Model for Video Background Music Generation**
**Sizhe Li**, Yiming Qin, Minghang Zheng, Xin Jin, Yang Liu
Published on CVPR 2024 (Conference on Computer Vision and Pattern Recognition)
https://arxiv.org/abs/2405.11913

**09/2023** *Recent Advances in Class-Incremental Learning*
Dejie Yang, Minghang Zheng, Weishuai Wang, **Sizhe Li**, Yang Liu
Published on ICIG 2023 (International Conference on Image and Graphics)
Image and Graphics. Lecture Notes in Computer Science, vol 14356
*https://link.springer.com/chapter/10.1007/978-3-031-46308-2_18*

**02/2023** *Phrase-level Temporal Relationship Mining for Temporal Sentence Localization*
Minghang Zheng, **Sizhe Li**, Qingchao Chen, Yuxin Peng, Yang Liu
Published on AAAI 2023 (AAAI Conference on Artificial Intelligence)
Proceedings of the AAAI Conference on Artificial Intelligence, 37(3), 3669-3677
*https://ojs.aaai.org/index.php/AAAI/article/view/25478*

**06/2022** *Phrase-level Prediction for Video Temporal Localization*
**Sizhe Li**, Chang Li, Minghang Zheng, Yang Liu
Published on ACM ICMR 2022 (ACM International Conference on Multimedia Retrieval)
Proceedings of the 2022 International Conference on Multimedia Retrieval *PAGES 360–368*
*https://dl.acm.org/doi/abs/10.1145/3512527.3531382*

**07/2017** *Status of the Study of Interacting Dark Energy Models*
JuanJuan Guo, JiaLin Song, **Sizhe Li**, Xingyu Nan
Published on Astronomy and Astrophysics
Vol.05 No.03 (2017), Article ID: 21283, 7 pages
*https://image.hanspub.org/html/1-2720079_21283.htm*

## INTERNSHIP EXPERIENCE

**Commercial Technology Algorithm Engineer Intern | ByteDance**  **05/2023 to 09/2023**
- Responsible for optimizing the ad review algorithm, improving the accuracy and recall of machine review, optimizing the fusion between modalities using multimodal models, and designing algorithm, conducing comparative experiments and going live with the algorithm;
- Used ResNet_v67 to replace the original model structure to optimize the space required to run the program while maintaining performance; proposed a cross-modal fusion algorithm to improve the auc audit by 1%.

## PROFESSIONAL COMPETITIONS EXPERIENCE

**CVPR'23 Embodied Scene Understanding Challenge (Situation Understanding Track) 2023**  **06/2023**
- Located the position and viewpoint of a target in a 3D scene based on natural language descriptions;

- Responsible for the idea definition and model realization, and won the first prize at the university level.

**The 19th Jiang Zehan Cup Mathematical Modeling and Computer Application Competition of PKU** 04/2022
- Performed mathematical modeling of real-world problems and used computers as a tool to solve them;
- Responsible for modeling and code implementation, and won the third prize at the university level.

## TA&RA EXPERIENCE

**RA in Wangxuan Institute of Computer Science, Peking University** 05/2021-08/2023
- Working on research of multi-modal learning, instructed by Assistant Prof. Yang Liu.

**TA of Professional Course Design and Analysis of Algorithm** 02/2023-06/2023
- Gave weekly problem solving sessions (2 hours) to help students supplement and expand their knowledge of algorithms and application, and led them to understand cutting-edge papers and advanced algorithms.

**TA of Professional Course Computing Generality (Python)** 09/2022-01/2023 & 09/2023-01/2024
- Responsible for weekly explanation of exercises, Q&A sessions, and homework assignments.

## ON-CAMPUS ACTIVITIES

- **12/2020** Organized and planned the New Year's Party for Students from Liaoning at PKU
- **11/2020** Took part in the audition for Jiangsu TV's Super Brain program and entered the top 200 nationwide
- **09/2020-present** Participated in many volunteer activities as a volunteer of PKU Heart Club such as the opening ceremony
- **09/2020-09/2021** As one of the key members of the Youth Astronomy Club of PKU, organized astronomical observation, lectures and science popularization activities for the members, and also responsible for the daily operation of the club
- **09/2020-05/2021** Acted as the student assistant of the Department of Economics and Management of PKU, responsible for the operation and maintenance of the department's official website, news release and content organization
- **03/2020-06/2022** Involved in the operation of PKU's official WeChat account and published several articles during the period
- **08/2020** Involved in the practice activity at Hangzhou Institute for Advanced Study, UCAS to explore the application of intelligent computer technology and industrial development in the field
- **08/2020** Served as a class teacher in the summer class activity for outstanding high school students at PKU and organized events to promote the culture of PKU
- **01/2020-06/2022** As a volunteer of PKU Liaoning Admissions Team, took charge of communicating with candidates and parents, introducing the majors and school profile
- **09/2019-09/2021** Played forward for the School of Electronics Engineering and Computer Science basketball team, participated in various tournaments and won the third prize in the 2021 PKU Cup

## SKILLS & INTERESTS

- C++, Python, Arduino, Verilog and HTML
- TOEFL 109 (R30/L28/S24/W27)
- Latex, Git, PR and Linux
- Piano Level 10, Guitar