

# Linkai Peng

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🏠 <https://vocaliodmiku.github.io> | 🌐 <https://github.com/vocaliodmiku>  
🎓 [Google Scholar](#) | 📄 [Research Gate](#)

## Education

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**Beijing Language and Culture University** Sep. 2019 - Jun. 2022

M.S. in Software Engineering

*Speech Acquisition and Intelligent Technology (SAIT) Lab*

🎓 *Graduated with Outstanding Graduation Dissertation Award, supervised by Prof. Jinsong Zhang.*

Relevant Courses: Speech Information Processing, Prosodic Information Processing,  
Academic lectures on Language Intelligence Technology,  
Fundamental of Man-Machine Speech Communication.

**South China Normal University**

Sep. 2015 - Jun. 2019

B.S. in Physics

## Experience

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**NetEase**

Jul. 2022 - Present

*Speech Technology Engineer in Youdao Group*

*Beijing, China*

- Developing computational models and applying linguistic knowledge to improve Language Learning system for Chinese English Learner.
- Designed and improved speech assessment systems, including real-time systems and offline systems optimized for edge devices.

**ByteDance**

Nov. 2020 - Feb. 2021

*Speech Research intern in AI Lab*

*Beijing, China*

- Worked in AI lab to optimize an education product using speech techniques, enhancing customer experience for millions of online users.
- Investigated and improved the algorithms for automatic scoring of pronunciation quality, adapting them to our specific scenario for potential performance gain.

## Papers

- [1] **Peng, Linkai**, Baorian Nuchged, and Yingming Gao. "Spoken Language Intelligence of Large Language Models for Language Learning." arXiv preprint arXiv:2308.14536 (2023).
- [2] R. Bao, **L. Peng**, Y. Gao and J. Zhang, "The Contribution of Phonological and Fluency Factors to Chinese L2 Comprehensibility Ratings: A Case Study of Urdu-speaking Learners," 2022 13th International Symposium on Chinese Spoken Language Processing (ISCSLP), Singapore, Singapore, 2022, pp. 394-398, doi: 10.1109/ISCSLP57327.2022.10038233.
- [3] R. Bao, **L. Peng**, Y. Yan and J. Zhang, "An Exploratory Study for Quantifying the Contextual Information for Successful Chinese L2 Speech Comprehension," 2022 13th International Symposium on Chinese Spoken Language Processing (ISCSLP), Singapore, Singapore, 2022, pp. 389-393, doi: 10.1109/ISCSLP57327.2022.10038037.
- [4] R. Bao, **L. Peng**, Y. Gao and J. Zhang, "The Importance of Lexical Tone for Sentence Understanding: Utilizing Functional Load Principle to Simulate Comprehension Process," 2022 International Conference on Asian Language Processing (IALP), Singapore, Singapore, 2022, pp. 379-383, doi: 10.1109/IALP57159.2022.9961243.
- [5] R. Bao, **L. Peng** and J. Zhang, "The Contributions of Initials and Finals to L2 Chinese Comprehensibility Based on Functional Load Principle," 2022 International Conference on Asian Language Processing (IALP), Singapore, Singapore, 2022, pp. 358-362, doi: 10.1109/IALP57159.2022.9961277.
- [6] **Peng, Linkai**, et al. "Text-Aware End-to-end Mispronunciation Detection and Diagnosis." arXiv preprint arXiv:2206.07289 (2022).
- [7] **L. Peng**, W. Dai, D. Ke and J. Zhang, "Multi-Scale Model for Mandarin Tone Recognition," 2021 12th International Symposium on Chinese Spoken Language Processing (ISCSLP), Hong Kong, 2021, pp. 1-5, doi: 10.1109/ISCSLP49672.2021.9362063.
- [8] **Peng, L.**, Fu, K., Lin, B., Ke, D., Zhan, J. (2021) A Study on Fine-Tuning wav2vec2.0 Model for the Task of Mispronunciation Detection and Diagnosis. Proc. Interspeech 2021, 4448-4452, doi: 10.21437/Interspeech.2021-1344
- [9] Gao, Y.; Nuchged, B.; Li, Y.; **Peng, L.**. An Investigation of Applying Large Language Models to Spoken Language Learning. Appl. Sci. 2024, 14, 224. <https://doi.org/10.3390/app14010224>
- [10] **Peng, Linkai**, Baorian Nuchged, and Yingming Gao. "Spoken Language Intelligence of Large Language Models for Language Learning." arXiv preprint arXiv:2308.14536 (2023).