

# Jiawei Yu

## INFORMATION

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## EDUCATION

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**Beijing Language and Culture University (BLCU)** Beijing, China

- M.S. in Computert Science. 2017-2020
  - *Advisor*: Prof. Jinsong Zhang
  - *Overall GPA*: 3.63/4.0 (90.1/100, top 1%)
  - *Main works*: Using acoustic and articulatory features to improve language recognition under deep learning framework.

**Changchun University of Technology (CCUT)** Changchun, China

- B.S. in Computert Science. 2012-2016
  - *Overall GPA*: 3.52/4.0 (86.4/100, top 1%)

## WORK AND RESEARCH EXPERIENCE

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**Intengine Technology Corporation** Beijing, China

- **Automatic Speech Recognition Algorithm Engineer** Jun, 2022-Present
  - Worked on multilingual speech recognition and key words spotting.
  - Worked on grapheme-to-phoneme and speech forced alignment for Cantonese and Bahasa Indonesia.

**SAIT Lab, Beijing Language and Culture University** Beijing, China

- **Research Assistant, supervised by Prof. Jinsong Zhang** Sep, 2020-Sep, 2021
  - Worked on language recognition using articulatory features.
  - Researched on rectified goodness of pronunciation algorithm for pronunciation proficiency evaluation.

**Center for Speech and Language Technologies(CSLT), Tsinghua University** Beijing, China

- **Research intern, supervised by Prof. Dong Wang.** Sep, 2018-July, 2019
  - Researched on speaker recognition using attention mechanism.
  - Researched on zero-resource language recognition.

## RESEARCH PROJECTS

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- **Articulatory features based Dilated LSTM model for short utterance language recognition**
  - Utilizing the advantage of cross-language modeling of articulatory features and the effectiveness of Dilated LSTM in modeling temporal dependencies in the acoustic signal for short utterance [1].
- **Articulatory features based TDNN model for language recognition**
  - Researched on the application of articulatory information in deep neural network based language recognition [3].
- **Zero-resource language recognition**
  - Proposed a recognized scheme for low resource languages [4].

- **Phonetic-attention for deep speaker verification**

- Researched on applying attention mechanism to improve the discriminability between speaker vectors.

## **PUBLICATIONS AND PATENTS**

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1. **Jiawei Yu**, Minghao Guo, and Jinsong Zhang, "Articulatory Features Based Dilated LSTM Model for Short Utterance Language Recognition," in *International Conference on Acoustics, Speech and Signal Processing (ICASSP)*. IEEE, 2021. (rejected)
2. **Jiawei Yu**, "An Overview of Speech Emotion Recognition," One chapter in the book "Basic Law for ASR" in Center for Speech and Language Technologies(CSLT) internal in Tsinghua University. 2019. (Under processing)
3. **Jiawei Yu**, Minghao Guo, Yanlu Xie, and Jinsong Zhang, "Articulatory Features Based TDNN Model for Spoken Language Recognition," in *2019 International Conference on Asian Language Processing (IALP)*. IEEE, 2019.
4. **Jiawei Yu** and Jinsong Zhang, "Zero-resource Language Recognition," in *2019 Asia-Pacific Signal and Information Processing Association Annual Summit and Conference (APSIPA ASC)*. IEEE, 2019.
5. **Jiawei Yu**, Yanlu Xie, Jinsong Zhang, "Robust Language Identification using X-vectors", *proceedings of the 13<sup>th</sup> Phonetics Conference of China*, PCC 2018.
6. Jinsong Zhang, **Jiawei Yu** and Yanlu Xie, Patent No. CN110517663A, "A Method of Articulatory Features Based TDNN Model for Spoken Language Recognition," 2019.
7. Yanlu Xie, Minghao Guo, Jinsong Zhang, **Jiawei Yu**, Patent No. CN110428803A, "A Method for Foreign Accent Recognition," 2019

## **ACADEMIC ACTIVITIES**

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- **Reviewer**

International Conference on Asian Language Processing (IALP) 2019

Asia-Pacific Signal and Information Processing Association (APSIPA) 2019

- **Presentation**

Made an oral presentation for the Paper [4] in Lanzhou, 2019.11

Made an poster presentation for the Paper [3] in Shanghai, 2019.10

Made an oral presentation for the Paper [5] in Guangzhou, 2018.11

## **TEACHING EXPERIENCES**

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- 2019 Fall and Spring Tutor for **Higher Mathematics**, College of Information Science, Beijing Language and Culture University.
- 2018 Fall and Spring Tutor for **Linear Algebra**, College of Information Science, Beijing Language and Culture University.

## **GRANT AND AWARDS**

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- 2019.08 **Best Student Paper Award**, National Conference on Man-Machine Speech Communication (NCMMSC), Qinghai.
- 2018-2019 **2nd Prize of Excellent Undergraduate Scholarship**, BLCU.
- 2018.10 **6th Place** in the Oriental Language Recognition (OLR) 2018 Challenge, Hawaii.
- 2018-2017 **3rd Prize of Excellent Undergraduate Scholarship**, BLCU.

- 2012-2016    **1st Prize Scholarship** in four consecutive years (1%), CCUT.
- 2014.10       **1st Prize** in Jilin Contest District in China Contemporary Undergraduate Mathematical Contest in Modeling, Changchun.
- 2014.09       **Bronze Medal** in The ACM International Collegiate Programming Contest (ACM-ICPC) Asia Regional Contest Changchun Site, Changchun.
- 2014.06       **1st Prize** in Programming Contest of CCUT(1%), CCUT.

## ***KNOWLEDGE AND SKILLS***

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### **Theoretical Background**

- Machine learning, Language recognition, Speaker recognition, Speech recognition.

### **Technical Skills**

- Programming languages: C/C++, Python, SHELL.
- Toolkits: PyTorch, Kaldi, TensorFlow, L<sup>A</sup>T<sub>E</sub>X.