

# Yupei Zhang

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Objective: PhD

## EDUCATION

**City University of Hong Kong (CityU)** GPA: 3.35 / 4.3 Hong Kong, Hong Kong  
*MSc Multimedia Info Technology (MSMIT1) – Electrical Engineering Department* Sep 2020 – Aug 2021  
 Related courses: Machine Learning, Digital Image Processing, Computer Graphics, Complex Network, etc.

**Beijing Language and Culture University (BLCU)** GPA: 3.55 / 4.0 | 86.9 / 100 Beijing, Beijing  
*Bachelor of Engineering in Digital Media Technology & Japanese Minor* Sep 2015 – Jun 2019  
 Related courses: C language, C++, Data Structure, Virtual Reality, Video and Audio processing, Signal Processing etc.

**Honors/Awards:**

- Interdisciplinary Contest in Modeling (2018): Honorable Mention (Administered by COMAP)
- National Encouragement Scholarship (2018)**; BLCU University-level Outstanding Student Leader (2018)
- BLCU Third Prize Scholarship (2017); BLCU Individual Scholarship (2016)

## PUBLICATION

### Journal:

- Yupei Zhang\***, Li Pan\*, Qiushi Yang, Tan Li, Zhen Chen. Unified Medical Multi-modal Diagnostic Framework with Multi-level Reconstruction Pre-training and Heterogeneity-combat Downstream Tuning. (**MedIA**, under review, \* equal contribution)
- Li, Z., **Zhang, Y.**, Xing, H., & Chan, K. L. (2023). Facial Micro-Expression Recognition Using Double-Stream 3D Convolutional Neural Network with Domain Adaptation. *Sensors*, 23(7), 3577. (Impact Factor: 3.9, **JCR Q1**)
- Zhang, Y. P.**, & Chan, K. L. (2021). Saliency detection with moving camera via background model completion. *Sensors*, 21(24), 8374. (Impact Factor: 3.9, **JCR Q1**)

### Conference:

- Li Pan\*, **Yupei Zhang\***, Qiushi Yang, Tan Li, Zhen Chen. Combat Long-tails in Medical Classification with Relation-aware Consistency and Virtual Features Compensation. (**MICCAI 2023, early accepted**, 14%, **CCF-B**, \* equal contribution)
- Zhang, Y.** (2022, November). Research on Phoneme Recognition using Attention-based Methods. In Proceedings of the 2022 11th International Conference on Computing and Pattern Recognition (pp. 405-411). (ICCPR 2022 Best oral presentation, EI conference)

## PATENT

- AN INTERACTIVE ELDERLY ASSISTANCE SYSTEM, as one of the inventors 26 July, 2022

## RESEARCH EXPERIENCE

**Centre for Intelligent Multidimensional Data Analysis Limited, InnoHK, CityU & Oxford** Hong Kong, Hong Kong  
*Research Assistant* Oct 2021 – Now

- Speech to Text and Text to Speech using SAPI library; Voice changer using RVC.
- Pose Estimation development using Flutter; Motion Capture using Xsens.
- Full Stack Web Development.

**Saliency detection with moving camera via background model completion, CityU** Hong Kong, Hong Kong  
*Dissertation project* Feb 2021 – Aug 2021

- Background Modeling, Background subtraction, Feedback Mechanism and Evaluation.

**Analysis of Automatic Landmarks Based On Signal Processing Methods, BLCU** Beijing, Beijing  
*Final year thesis which won the university's excellent thesis.* Mar 2019 – May 2019

- Conducted a comparison between signal processing and manually labeling phonemes in TIMIT corpus with Python and Matlab to validate the feasibility of the signal processing method for landmark detecting.

**Speech Acquisition and Intelligent Technology Lab (SAIT Lab), BLCU** Beijing, Beijing  
*Corpus research for helping learners effectively master Chinese phonetic skills; App project to help teachers effectively master international students' Chinese skills.* Jul 2018 – Aug 2019

- Self-taught and completed labeling of a corpus of second language learners with Praat efficiently.
- Self-taught HTML, CSS & Javascript within a week to optimize user interface of a Chinese learning app.

## PROFESSIONAL EXPERIENCE

**Zhengzhou Enyu Electronic Technology Co., LTD** Zhengzhou, Henan  
*Implementation Engineer, research and development Division* Jul 2019 – Nov 2019

- Maintained the Edelweiss database daily; company income statement for 4 subsidiaries monthly using SQL;

**JD.Com, Inc.** Beijing, Beijing  
*Intern, Technology Research & Development Product Manager, Y Division* Jan 2018 – Mar 2018