Yayue Deng

Master's Degree
Major in Artificial Intelligence
Beijing University of Posts and Telecommunications

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EDUCATION

• **Beijing University of Posts and Telecommunications (BUPT)** — *Sep 2022 – June 2025 (Expected)*
Master's Degree in Artificial Intelligence — CGPA: 3.66/4.0

• **Guanghua School of Management, Peking University (PKU)** — *Aug 2020 – Aug 2021*
Young Talent Academy in Digital Economy

• **Beijing Language and Culture University (BLCU)** — *Sep 2018 – June 2022*
Bachelor's Degree in Language Intelligence and Technology — CGPA: 3.77/4.0

OBJECTIVE

Computer Science and Artificial Intelligence major student with strong interests and professional background in mechine learning, especially engaged in Speech Synthesis, Natural Language Processing. Proficient in AI algorithm and skilled in Python. Hoping to combine my specialty with NLP to accomplish a talking chatbot with EQ and IQ in the future.

PUBLICATIONS

[1] **Yayue Deng**, Jinlong Xue, Yukang Jia, Qifei Li, Yichen Han, Fengping Wang, Yingming Gao, Dengfeng Ke, Ya Li. CONCSS: Contrastive-based Context Comprehension for Dialogue-appropriate Prosody in Conversational Speech Synthesis. **ICASSP 2024 (CCF-B)**

[2] **Yayue Deng**, Mohan Xu, Yao Tang. FMPAF: How Do Fed Chairs Affect the Financial Market? A Fine-grained Monetary Policy Analysis Framework on Their Language. **AAAI 2024 Workshop**: AI in Finance for Social Impact.

[3] **Yayue Deng***, Jinlong Xue*, Fengping Wang, Yingming Gao, Ya Li. CMCU-CSS: Enhancing Naturalness via Commonsense-based Multi-modal Context Understanding in Conversational Speech Synthesis. **ACM MM 2023 (CCF-A)**

[4] Jinlong Xue, **Yayue Deng**, Fengping Wang, Ya Li, Yingming Gao, Jianhua Tao, Jianqing Sun, Jiaen Liang. M 2-CTTS: End-to-End Multi-Scale Multi-Modal Conversational Text-to-Speech Synthesis. **ICASSP 2023 (CCF-B)**

[5] Dengfeng Ke*, **Yayue Deng***, Yukang Jia, Jinlong Xue, Ya Li. Rhythm-controllable Attention with High Robustness for Long Sentence Speech Synthesis. ISCSLP 2022

[6] Jinlong Xue, **Yayue Deng**, Yichen Han, Ya Li, Jianqing Sun, Jiaen Liang. ECAPA-TDNN for Multi-speaker Text-to-speech Synthesis. ISCSLP 2022

[7] Xiaoli Feng, Yanlu Xie, **Yayue Deng**, Boxue Li. A Dynamic 3D Pronunciation Teaching Model Based on Pronunciation Attributes and Anatomy. INTERSPEECH 2020

[8] Shiya Peng, Chang Liu, **Yayue Deng**, Dong Yu. Morality Between the Lines: Research on Identification of Chinese Moral Sentence. CCL 2021

[9] Jinlong Xue, **Yayue Deng**, Yingming Gao, Ya Li. Retrieval Augmented Generation in Prompt-based Text-to-Speech Synthesis with Context-Aware Contrastive Language-Audio Pretraining. *Submitted to* **INTERSPEECH 2024**

[10] Jinlong Xue, **Yayue Deng**, Yingming Gao, Ya Li. Auffusion: Leveraging the Power of Diffusion and Large Language Models for Text-to-Audio Generation. *Submitted to* **TASLP**.
Page link: https://auffusion.github.io/

EXPERIENCE

•**Unisound Inc. College-Enterprise Cooperation** *Jan 2022 – Jun 2022*

Intern Beijing

  – Team: Joint Laboratory Project
  – Directing: Emotional Speech Synthesis
  – Independently constructed and delivered a multi-emotion speech database, comprising 9,566 utterances with a total duration of approximately 11.2 hours, annotated with four emotional states (neutral, happy, angry, and sad)
  – Contributed to the company's synthesis system, proposing a novel attention mechanism approach to address the prosody control issue in autoregressive speech synthesis

•**China Mobile Research Institute** *Nov 2021 – Jan 2022*

Winter Intern Beijing

  – Team: Artificial Intelligence Department
  – Directing: Robust Speech Synthesis
  – Investigated advanced speech synthesis techniques, reviewing over 20 leading papers in Robust Speech Synthesis, enhancing robustness and naturalness in the synthesis of long sentences the prosody of the speech synthesis system.
  – Contributed to the First Audio Deep Synthesis Detection Challenge (ADD 2022) at ICASSP 2022, focusing on generating synthetic speech using a non-autoregressive system

PERSONAL PROJECTS

•**Conversational Speech Synthesis** *Jun 2023 - Now*

Seek to enhance Human-Computer Interaction (HCI), synthesizing natural speech Beijing

  – Tools & technologies used: Pytorch & Speech Synthesis (VITS, Tacotron2. Fastspeech2), Context Understanding, Contrastive Learning, Attention Mechanism, Fine-Grained Prosody Modeling
  – Granted four invention patents; approved for a project by the National Natural Science Foundation of China
  – Participated in the "Interactive and Empathetic Spoken Speech Generation for Mental Health Counseling" Project supported by Open Project Program of the National Laboratory of Pattern Recognition (NLPR) (202200042)

•**Peking University's Off-Campus Research Assistant** *Mar 2023 – Sep 2023*

Investigate the influence of policy communication by the Federal Reserve on various financial variables Beijing

  – Tools & technologies used: Pytorch & Pretrained Language Model, Local-Projection Regression
  – Collaborated with Peking University's Professor Yao Tang and Ph.D. candidate Mohan Xu to develop a novel approach that integrates large language models (LLMs) with regression analysis to provide a comprehensive analysis of the impact of the press conference communications of chairs of the Federal Reserve on financial markets

•**National College Students' Innovation and Entrepreneurship Training Program** *Jul 2020 – Apr 2021*

Help Chinese learners understand the exact location and method of the phoneme articulation intuitively Beijing

  – Tools & technologies used: Unity & Dynamic 3D Pronunciation Model, Speech Sounds Visualized
  – Granted an invention patent; recognized as the Excellent Project Leader in the National College Students Innovation and Entrepreneurship Training Program as the independent initiator of the project

ACHIEVEMENTS

•**SPS Scholarship, IEEE Signal Processing Society**: Provided travel grants to attend ICASSP. *Jan 2024*

•**National Scholarship, BUPT**: Awarded to top 2% of students, amounting to RMB 2,000. *Sep 2023*

•**First-class Scholarship, BUPT**: Awarded for academic excellence and outstanding performance *Seq 2023*

•**Outstanding Graduate Student, BUPT** *Seq 2023*

•**Test for English Majors-Band 8 (TEM-8)**: A proficiency examination for English majors *Jun 2023*

•**Beijing Universities' Outstanding Undergraduate Thesis/Graduation Projects**: Top 8 of 1929 *Dec 2022*

•**Mathematical Modeling Contest Second Prize** *Mar 2021*

•**14th China Collegiate Computer Design Competition Third Prize** *Mar 2021*

•**National Third Prize in 11th National College Mathematics Competition** *Nov 2019*

TECHNICAL SKILLS AND INTERESTS

Languages: English (Fluent, TEM-8), Chinese - Mandarin (native)
Technologies and Libraries:: PyTorch, Scikit-Learn, Numpy, Pandas, Jupyter, Github
Coursework: Natural Language Processing, Machine Learning, Speech Recognition and Speech Synthesis
Areas of Interest: Dancing (member of Dance Team of BLCU), Latin Dance, Chinese Zither