Bohong Lu

Homepage: https://github.com/NormalLLer
Tel: +86-13313709767 | Email: lubohong@yeah.net

EDUCATION BACKGROUND

Beihang University (BUAA, Project 985 & 211)   *Beijing, China*
Shen Yuan Honors College   *09/2020–06/2024(Expected)*
Candidate for Advanced Engineering in *Computer Science and Technology*

- **GPA: 3.82/4.0**

HONORS & AWARDS

- **Second Prize Scholarship** of BUAA   *2021–2022 Academic Year*
- **Second Prize Scholarship** of BUAA   *2020–2021 Academic Year*
- **Outstanding Prize** of Subject Competition Scholarship of BUAA   *09/2022*
- **First Prize** of College Mathematical Modeling and Computer Application Competition   *10/2022*
- **Second Prize of Python Programming**, "Blue Bridge Cup" National Software and Information Technology Professional Talent Competition   *06/2022*

RESEARCH EXPERIENCE

Conversation Topic Identification Research   *02/2023–Present*
Advised by ***Prof. Weiqiang Zhang***, *Department of Electronic Engineering*, *Tsinghua University*

- Researched current phone recognition models and training methods.
- Proposing more effective unsupervised pre-training models for phone recognition, to better transform input source speech sequences into phoneme token sequences, and later utilize them as inputs to the training model. (***Current***)

Research on Generative Speech Dialogue Model and Algorithm   *09/2022–11/2022*
Advised by ***Prof. Wenge Rong***, *School of Computer Science and Engineering*, *BUAA*

- Studied speech processing models and problems in text-to-speech processes, including speech expression synthesis, prosody modeling, prosodic conversion, Transformer algorithm, BERT model.
- Referred to the dGSLM model designed by Facebook, the first "text-free" model that generates natural speech dialogue audio samples, based on unsupervised speech units and utilized cross-trained in two-channel original dialogue audio and Fisher datasets, generating speech and language symbols in two channels simultaneously without any text or label.
- Learned about discrete speech representation, relevant waveform generation, the building of a Dialogue-Language Model (DLM), and the verification of mathematical models.
- Researched the evaluation methods of language models, and statistical indicators such as Negative Log Likelihood (NLL) and Mean Absolute Error (MAE), and evaluated the generalization ability of the model through the Mean Opinion Score (MOS) of the subjects.

INTERNSHIP EXPERIENCE

China Mobile IT New Technology   *Beijing, China*
Software Development Intern (Online)   *12/2022–01/2023*

- Developed a distributed web application with multiple microservices based on the Java Spring Cloud framework, including Maven for project management, MyBatis for MySQL database access, and microservice components for Alibaba Nacos, Seata, and Sentinel.
- Responsible for the back-end development of the project: utilizing SQL to access data, writing back-end logic codes such as Controller and Mapper, and building distributed applications with micro-service components.

ACADEMIC SKILLS

- Programming: Proficient in *C*, *C++*, ***Python***, ***Java, SQL, Ruby, VHDL***; ***MATLAB*** for simulation
- Web Framework: *HTML*, *CSS*, *JavaScript* for Frontend; *Ruby on Rails*, *Spring* (*Boot*, *Cloud*, *Maven*, *MyBatis*), *Python Flask* for Backend; *JetBrains IDEs*, *VS Code*, *Sublime Text*, *Vim* for Environment
- English Proficiency: ***IELTS 7.0***