Xiaoqin Feng (冯小琴)

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Online version: https://xqfeng-josie.github.io/resume/cv

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Curriculum Vitae

Google Scholar

XqFeng-Josie

Introduction

I am currently a Tech Lead at Mobvoi AI Lab, specializing in AI product development, research, and interactive application design. My core responsibilities encompass the end-to-end product lifecycle, including data construction, performance evaluation, algorithm optimization, and facilitating effective product communication to align cross-functional teams. Additionally, I play a crucial role in managing team members and coordinating resources. I am committed to developing products that are driven by user needs and data insights, making me a versatile contributor to AI projects.

Education

Master Student Software Engineer (M.Sc.) **Oct. 2016 – Jan. 2019**

Beijing University of Technology BJUT; overall grade: 86 (max. 100) between "Very Good" and "Good" *Beijing, China*

Bachelor Student Computer Science (B.Eng.) **Sep. 2012 – Jul. 2016**

Southwest Minzu University SMU; overall grade: 3.66 (max. 4.0), "Top 5" of 154 students *Chengdu, China*

Professional Experience

Tech Lead **May. 2023 – Present**

[Mobvoi] *Beijing, China*

- **Product Support**: Delivered full-time support for AI products by managing requirement communication, coordinating cross-functional teams, overseeing cost management and ensuring timely program delivery.
- **Developer**: Developed a Large Aduio Model service supporting 800M+ customers, enhancing scalability and functionality.
- **Performance Evaluation**: Conducted comprehensive performance evaluations of multimodal algorithms and products to drive continuous optimization and ensure product quality.
- **Data Pipeline Development**: Designed and maintained robust multimodal data collection pipelines, enabling data-driven decision-making and supporting key product development initiatives.

Senior Speech algorithm Engineer **Jul. 2019 – May. 2023**

[Mobvoi] *Beijing, China*

- **Researcher**: Expertise in multi-lingual TTS and NLP technologies, including tokenization, TN(text normalization), polyphone disambiguation, prosody modeling, emotion detection, and leading the model R&D of Unified Frontend.
- **Developer**: Designed and maintained scalable TTS and NLP systems, integrating advanced features such as control-TTS and paragraph-TTS.
- **Product Support**: Participated in the incubation and design of AI algorithm products
- **Mentor**: working with 3 interns (annual) in NLP and Text-to-speech(TTS)

Algorithm Research(Intern) **Aug. 2018 – Dec. 2018**

TAL AI Lab *Beijing, China*

- **Researcher**: Developed a Deep Knowledge Tracing (DKT) pipeline to evaluate various methods, including data mining, weight graph construction, graph embedding, and metric distance analysis
- **Key results**: Outstanding Intern of 10 members; one co-author submission to *AIED2019*; (*)regular staff opportunity

Others **Sep. 2016 – Aug. 2018**

IOT-Lab *Beijing, China*

- **- DeeCamp AI Lab**: Movie Recommendation based on knowledge graph(KG) (co- with two Ph.D. three M.Sc.)
- **- Ali Tianchi Competition CCF**: User Location Prediction, O2O coupon usage predictions e.g.
- **- TAL AI Lab**: FutrueCamp: Research on Recommendation Systems, after that I got an internship
- **- TextCNN**: Methods are implemented based on TF-IDF, xgboost, lgb, textcnn, etc. code
- **- Dialogue Generation**: Simmc2 task： Methods are implemented based on BERT、GPT、Multimodal, etc.
- **- IoT Bus HD Intelligent Video Surveillance**: Programming and development of application algorithms
- **- IOT-AI Video Analyser**: Programming and development of application algorithms

Expertise and Skills

Expertise is context- and comparison-dependent. Here states the years of experience in terms of use, also indicates a subjective estimation of the level of expertise (either *elementary*, *intermediate*, *experienced*, or *expert*):

- **Domain**: *TTS frontend algorithms*(text normolization, polyphone, g2p, prosody, unified-frontend, etc.)**experienced**

  NlP(emotion analysis, spoken events, speaking style, stress, etc.) **experienced**

  Knowledge Information (knowledge tracking, knowledge representation, etc.) **intermediate**;

  Service Deployment (Deploying TTS services and large audio models using C++ and Python. **experienced**;

  TTS Backend Model (acoustic models、 vocoder)**intermediate**;

- **Language**: *C/C++* (4+ years, **experienced**); *Python* (5+ years, **experienced**); *Writing* (4+years, good writing habits.) I speak native Mandarin; elementary English.

Scholarships and Awards

Ali Tianchi Competition **Sep. 2018**
Good,19/2845 *Beijing, China*

National Scholarship **Sep. 2016**
Southwest Minzu University *Chengdu, China*

Outstanding Secretary of the Youth League Scholarship **May 2014**
Southwest Minzu University *Chengdu, China*

Annual Excellent Student Innovative Project **Sep. 2013**
Southwest Minzu University, 2nd Award *Chengdu, China*

Outstanding Student Scholarship **Jun. 2013,Jun. 2014**
Southwest Minzu University *Chengdu, China*

Teaching Experience

Lecture - Embedded System Design Practice **2018**
Winter

As teaching assistant at BJUT, for M.Sc. students, approx. 80 students each year.

Company - Speech & NLP **2021-present**
Annual

As a mentor at Mobvoi, for interns (students), annual. 3 students.

Publications

Proceedings

- **Feng X**, Xie R, Sheng J, et al. *Population statistics algorithm based on MobileNet.* Journal of Physics: Conference Series. IOP Publishing, 2019, 6 pages. ICSP'2019.
- Wang Z, **Feng X**, Tang J, et al. *Deep Knowledge Tracing with Side Information.* International conference on artificial intelligence in education. Springer, Cham, 2019, 5 pages. AIED'2019.
- Rong Xie, **Feng X** *A method of quick edge detection based on Zynq.* International Conference on Cloud Computing and Internet of Things, 2018, 5 pages. CCIOT'2018
- Sheng J, **Feng X** *Research on the Internet of Things Platform for Smart and Environmental Protection.* International Conference on Cloud Computing and Intelligence Systems, 2018, 5 pages. CCIS'2018
- Chi W, **Feng X(*euqal contribution)**, Chen Y, et al. *Multi-granularity Semantic and Acoustic Stress Prediction for Expressive TTS.* In proceedings of APSIPA 2023, 5 pages.APSIPA'23
- Wang D, **Feng X**, Liu Z, et al. 2M-NER: contrastive learning for multilingual and multimodal NER with language and modal fusion[J]. Applied Intelligence, 2024: 1-17. 5 pages Applied Intelligence'2024

Patents

- **FENG XIAOQIN**, et al.. *Polyphone labeling method and device, and computer readable storage medium.* Mobvoi(*algorithm*),2019,CN111078898A
- **FENG XIAOQIN** et al. *Speech synthesis method and device and computer readable storage medium.* Mobvoi(*algorithm*),2020,CN110970013A
- **FENG XIAOQIN**, et al. *Polyphone labeling method and device, and computer readable storage medium.* Mobvoi(*application*),2020,CN111145724A
- **FENG XIAOQIN**, et al. *Construction method and device of rhythm model, rhythm labeling method and electronic equipment.* Mobvoi(*algorithm*),2022,CN115470351A
- **FENG XIAOQIN**, et al. *Construction method and device of rhythm model, rhythm labeling method and electronic equipment.* Mobvoi(*algorithm*),2022,CN115470350A
- **FENG XIAOQIN**, et al. *Voice synthesis method and device, electronic equipment and storage medium.* Mobvoi(*algorithm*),2022,CN115547289A
- **other 4 co-patents**: CN111079428A CN111178042A CN115578998A CN116013251A

Theses

- **Xiaoqin Feng**. 2019. *Research on multi-scene video intelligent processing system and scheduling management algorithm.* In the Institute of Software Engineering. Beijing University of Technology. 78 pages. **Master Thesis**. https://kns.cnki.net/master_thesis.pdf
- **Xiaoqin Feng**. 2016. *Intelligent Laboratory Management System.* In the Institute of Computer Science and Engineering. Southwest Minzu University. 37 pages. **Bachelor Thesis**.