

Xiaoting Fu

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EXPERIENCE

Spoken Language Assessment for ESL Learner - ArgLab, Raleigh, NC

Sept 2018 - Present

- Built an automatic spoken language assessment system based on the grammatical and semantical correctness of speech responses
- Trained an ASR engine with 9,000+ utterances from ESL learners along with 1,000+ hours external speech
- Applied pitch normalization and speech adaptation techniques to reduce differences between different models
- Trained a supervised neural network classifier on the output transcription for response quality assessment

FLECKS Project: Intelligent Agent Prototype - ArgLab, Raleigh, NC

June 2018 - Present

- Deployed the RHEL server for web hosting with Docker Container
- Coded the website to stream audio using Socket.io
- Integrated the Kaldi toolkit as a web service

ABB Inc. Software Engineer Intern - Raleigh, NC

May 2018 - Aug. 2018

- Developed tools to convert between different format of databases (SQLite and MS Access)
- Programmed tools for database comparison, changes revision and changes application from one database to another
- Designed visual interfaces for editing the SQLite database
- Implemented a SQL Parser for generating SQL action queries based on composite display queries

Continuous Children Speech Recognition Research - ArgLab, Raleigh, NC

Jan 2018 - May 2018

- Evaluated audio quality using signal-to-noise ratio and visualize the results
- Applied forced alignment to get the timestamps of the human generated transcriptions
- Used Kaldi nnet3 to train an acoustic model with for 40 hours of children's speech and use Librispeech corpus to train the language model
- Compared word-error-rate (WER) of the existing open-source speech recognition toolkits on children speech corpus including Kaldi and CMU Sphinx.
- Applied speaker adaptation, vocal tract length normalization (VTLN) to improve the existing models.

Android Electronic Health Record System - WKU, China

Jan 2017 - May 2017

- Developed an Android application for recording health data of the older adults
- Used Firebase for real-time database interaction
- Provided Health record visualization for user and recommend food and activity based on user daily data record
- Generated user manual and documentations for future references

EDUCATION

North Carolina State University - Raleigh, NC

Aug. 2017 - Present

Ph.D. in Computer Science; GPA: 3.7 / 4.0

Wenzhou-Kean University - Zhejiang, China

Sept. 2013 - Jun. 2017

B.S. of Computer Science; GPA: 3.9 / 4.0

SKILLS AND INTERESTS

Skills: Python, Shell, Java, C#, SQLite, NodeJS, Unix OS, Docker, Kaldi, CMUSphinx

Interests: Spoken Language Processing (SLP) with Machine Learning, looking for SLP/NLP or SE internship