

## Experience

Software Development Engineer II, Amazon Alexa AI

August 2020 - Present

- Engineering lead for <https://github.com/alexatech/teach> dataset collection and associated challenge.
- Optimize inference code for GPT-2 based neural response generation models to reduced average inference latency by  $\approx 65\%$ .

Consultant, modality.ai

July 2019 - August 2020

- Provide expert knowledge on multi-modal dialog systems and IVR technology.
- Design and implement software solutions.

Sr. Research Engineer, Educational Testing Service

February 2020 - July 2020

Research Engineer, Educational Testing Service

June 2017 - February 2020

Associate Research Engineer, Educational Testing Service

August 2015 - June 2017

- Lead four-person spoken dialog system engineering team. The dialog system has been used to collect over 40,000 conversations from crowd-sourcing workers and students in a TOEFL® preparation course hosted on edx.org for research usage.
- Designed and developed real-time feedback API for spoken English including streaming speech recognition API based on Kaldi.
- Led five-person cross-functional innovation team exploring new product opportunities for spoken dialog systems in the English language learning market.
- Developed goodness of pronunciation system using C++ and Kaldi improving correlation with human annotations by 20% relative over baseline system.
- Collaborated with Research Scientists on research studies resulting in 30 publication at conferences such as ACL, ASRU, ICASSP IWSDS, INTERSPEECH and SigDial.
- Selected as one of 130 recipients of the 2015 Annual ETS Presidential Awards for exemplary work on and significant role in the spoken dialog system project.

## Projects

sequitur-g2p

GitHub

- Added Python 3 support to the open-source Grapheme-to-Phoneme converter.

## Education

Staffordshire University, M.Sc. Computer Science, GPA 3.7

September 2013 - June 2015

- Thesis: Prototyping a Language Model for the Transcription of German Medical Reports: An Empirical Study

DHBW Stuttgart, B.Sc. Applied Computer Science, GPA 3.3

October 2010 - September 2013

- Selected as one of 10 out of 30 students in the IBM Dual Study Program for a 3 month international internship based on academic and professional performance.