# YOUNGSUN CHO

London, UK (Jan. 2022 -)

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## OBJECTIVE

Speech scientist and AI engineer with 2.5+ years of experience in commercial TTS and ASR, equipped with both technical and academic knowledge to build, analyze and improve state-of-the-art speech technologies. Seeking a dynamic environment to continue utilizing and widening my technical skills for building technologies that reach hundreds of millions of people world-wide.

## EDUCATION

**Ph.D. in English Linguistics**, Korea University, Seoul, South Korea                           Mar. 2018 - Aug. 2021
- Thesis: *Phonetic Posteriori-based Data Selection Strategies for Speech Synthesis* (Advisor : Hosung Nam)

**M.A. in English Linguistics**, Korea University, Seoul, South Korea                             Mar. 2015 - Feb. 2018
- Thesis: *Speaker Adaptation for Robust Speech Recognition*

**B.A. in Neuroscience (minor in Linguistics)**, Colgate University, New York, USA               Sep. 2009 - May 2013

## EXPERIENCE

**Research Engineer**, MediaZen, Inc., Seoul, South Korea                                          Jun. 2019 - Present
- *Text-to-Speech*
  - Implemented Transformer-based TTS; experimented with various frame-wise annotation schemes.
  - Pre-processed text and audio for training using G2P modules and forced-alignment.
- *Speech Recognition*
  - Built FST models AI-assistants in public transportation, contact centers (shopping, foods, and hospitality)
  - Trained DNN-HMM acoustic models that are robust to various indoor and outdoor noises.

## PROJECTS

**Data-Efficient TTS**, Doctoral Research                                                          Apr. 2020 - Present
- Improved clarity of end-to-end TTS by training on data selected by phone posteriors derived from speech recognition.
- Created 30+ voices of native and various non-native English speakers, using as little as 20 mins of speech data.
- Demonstrated effect for selecting quality TTS data for both standard and non-standard (non-native) pronunciations.

**Voice Command System for Subway Ticketing Kiosks**, Project Lead                                 Sep. 2020 - Present
- Led development of multi-lingual (English, Korean, Japanese and Mandarin Chinese) voice command based system for an airport express annually servicing over 100 million passengers.
- Researched on and applied cross-lingual pronunciation variations to accomodate to non-Koreans pronouncing Korean station names.
- Translated client needs into engineering tasks and guided the client over various technical details.
- Monitored user logs to constantly update ASR models to maintain recognition accuracy at 90%.

**Web-based Multi-Worker Speech Annotation System**, Project Lead                                  Jan. 2018 - Present
- Facilitated speech data pipeline by developing a web application that for real-time task assignment, automated rule application, editor feedback and monitoring of annotation workers.
- Contributed to 4 private, 3 public data generation contracts (worth £ 8.2 billion) by assuring 1000+ simultaneous worker connections and providing dashboards for real-time monitoring of annotation progress and quality.

## TECHNICAL SKILLS

- Programming Languages: Python, Javascript, Shell scripting, C++, SQL
- Tools: Kaldi, Pytorch, Tensorflow, Docker, Git

## OTHERS

- Languages: English (fluent), Korean (native), Mandarin Chinese (intermediate), Japanese (elementary)