

# Abner Hernandez

## Computational Linguist

Recently graduated linguist with experience in natural language processing, speech recognition and machine learning methods for linguistics and speech science.

## EXPERIENCE

### 42Maru Inc (Contractor), Seoul – Data Linguist

Sept 2020 - PRESENT

**Tasks:** Help build datasets for training machine learning-based models. Text summarization of financial articles via doccano.

### Spoken Language Processing Lab, Seoul – Speech Researcher

Jan 2019 - Sept 2020

**Lab Director:** Dr. Minhwa Chung (정민화), Ph.D. in Electrical Engineering

**Project:** Development of content creation and entertainment technologies based on intelligent tools to enhance accessibility of social communication disabilities. (사회적 소통약자의 접근성을 고려한 지능형 도구 기반 콘텐츠 제작 및 향유 지원 기술 개발)

**Tasks:** Linguistic analysis of dysarthria. Improving dysarthric speech recognition. Develop machine learning-based classifiers for detecting dysarthria or assessing severity levels.

### Language and Brain Lab, Vancouver – Research Assistant

Aug 2015 - Jun 2017

**Lab Director:** Dr. Yue Wang, Ph.D. in Linguistics

**Tasks:** Data organization or extraction. Linguistics annotation or alignments. Experimental stimuli preparation.

## EDUCATION

### Seoul National University, South Korea – Master Linguistics

Sept 2018 - Aug 2020

**Focus:** Computational linguistics, speech recognition, dysarthric speech and phonetics.

**Thesis Title:** *Automatic Detection and Assessment of Dysarthric Speech using Prosody-Based Measures*

### Simon Fraser University, Canada – Bachelor Linguistics (Honours)

Sept 2013 - June 2017

**Focus:** phonetics, psycholinguistics and neurolinguistics. Also minored in psychology with a focus on cognitive science.

**Thesis Title:** *Late and Early Bilingual Perception of Korean Stop and Affricate Contrasts*

## PUBLICATIONS

- [1] A. Hernandez, E.J. Yeo, S.H. Kim and M.H. Chung “Dysarthria Detection and Severity Assessment using Rhythm-Based Metrics,” in INTERSPEECH 2020 (to appear)
- [2] Hernandez, A., & Chung, M. (2019). Dysarthria Classification Using Acoustic Properties of Fricatives. Proceedings of the 2019 Seoul International Conference on Speech Sciences, 43-44.
- [3] Hernandez, A., Lee, H. Y., & Chung, M. (2019). Acoustic analysis of fricatives in dysarthric speakers with cerebral palsy. Phonetics and Speech Sciences, 11(3), 23-29.

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## SKILLS

**Languages:** Python, R

**Libraries:** Pytorch,  
TensorFlow, Scikit-learn

**Other:** Praat, Kaldi

## LINKS

[LinkedIn](#)

[GitHub](#)

[Research Gate](#)

[Personal Website](#)

## LANGUAGES

English, Spanish, Korean