Abner Hernandez

Seoul, South Korea
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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."
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] Hernandez, A.; Kim, S.; Chung, M. Prosody-Based Measures for Automatic Severity Assessment of Dysarthric Speech. *Applied Sciences* **2020**, 10, 6999. [LINK]
[2] Hernandez, A.; Yeo, E.J.; Kim, S.H.; Chung, M.H. Dysarthria Detection and Severity Assessment using Rhythm-Based Metrics. In Proceedings of Interspeech (to appear 2020)
[3] Hernandez, A.; Chung, M.H. Dysarthria Classification Using Acoustic Properties of Fricatives. In Proceedings of the Seoul International Conference on Speech Sciences (SICSS), Seoul, Korea, 15–16 November 2019; pp. 43–44. [LINK]
[4] Hernandez, A.; Lee, H.Y.; Chung, M.H. Acoustic analysis of fricatives in dysarthric speakers with cerebral palsy. *Phonetics and Speech Sciences* **2019**, 11, 23–29. [LINK]

SKILLS

Languages: Python, R

Libraries: Pytorch, TensorFlow, Scikit-learn

Other: Praat, Kaldi

LINKS

LinkedIn

GitHub

Research Gate

Personal Website

LANGUAGES

English, Spanish, Korean