

James Tanner

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Education

2016-present	PhD in Linguistics , McGill University, Montreal, QC, Canada	
2013-2015	MA in Linguistics , McGill University, Montreal, QC, Canada	3.83/4.0 GPA
2008-2011	BA in Linguistics , University of Kent, Canterbury, UK	First Class Honours

Experience

Oct 2017- July 2018	TTS Language Engineer , Amazon Development Center	Gdańsk, Poland
	Developed and released high-quality Text-to-Speech (TTS) voices used in Amazon products, including Alexa and Polly services. Applied linguistic expertise in analysing language data, developing models for multiple languages, and defining research projects. Collaborated with a wide range of stakeholders, including software engineers, UX researchers, international product and operations teams, and senior leadership to create world-class voices for consumer and business markets.	
	<ul style="list-style-type: none">Engineered TTS language models and developed real-world test cases for natural language processing systems.Designed, implemented, and reported results of research experiments, examining the impact of new features and products.Triaged reported issues, and implemented solutions through optimising language models, text normalisation modules, and synthesis systems.Collaborated with speech recognition and data science teams to enhance interaction experience based on consumer feedback.Designed and created scripts to ensure complete phonological coverage.Collected and curated datasets of high-visibility media and cultural topics for transcription, and automated data-extraction workflows.Implemented and optimised machine learning algorithms to enhance TTS output.Led technical reporting of new TTS products to international marketing and localisation teams to maximise visibility of language technologies within Amazon.Produced language-specific data annotation guidelines and training materials for remote transcription and annotation teams.	
Sept 2014- Oct 2017	Researcher , Montreal Language Modelling Laboratory	Montreal, QC, Canada
	Performed research on structured variability in phonology and phonetics through the extraction and analysis of speech data from large-scale natural language corpora. Owned and managed projects from conception to completion, applying knowledge of formal linguistics and research methodology to design experiments, analyse data, and interpret results. Defined project outcomes with external collaborators, and deliver results for publication.	
	<ul style="list-style-type: none">Developed data extraction and forced alignment tools for multiple speech corpora and language models. Techniques include: XML tree parsing, context-free grammars, SVMs, HMM classification, TextGrid parsing, automatic acoustic measurement.Analysed corpus and experimental data using visualisation and statistical modelling approaches. Techniques included: hierarchical linear and logistic regression models, maximum-entropy harmonic grammars, maximum-likelihood model selection.Developed and maintained annotation workflows and training materials for research assistants.Reported project progress to external collaborators, suggested alternative analyses, and implemented action points defined during feedback.	

Publications and Presentations

- 2019 **Tanner, J.**, Sonderegger, M., and Stuart-Smith, J. ‘Structured speaker variability in spontaneous Japanese stop contrast production’. International Congress of Phonetic Sciences 2019 (scheduled)
- 2017 **Tanner, J.**, Sonderegger, M., and Wagner, M.. ‘Production planning and coronal stop deletion in spontaneous speech’. *Laboratory Phonology*, 8(1), 15. [Access](#)
- Tanner, J.**. ‘Phonetic and phonological mechanisms of Tokyo Japanese vowel devoicing’. Presentation at *The Montreal-Ottawa-Toronto Phonology Workshop*, 22-24 March, Université du Québec à Montréal, Montreal, QC, Canada.
- 2015 **Tanner, J.**, Sonderegger, M., and Wagner, M.. ‘Production planning and coronal stop deletion in spontaneous speech’. In *Proceedings of the 18th International Congress of Phonetic Sciences*. Glasgow, UK: University of Glasgow. [Access](#)

Skills

Scripting and Markup Languages: Python (Pandas, NumPy, Seaborn, NLTK), R (tidyverse, lme4), Bash, \LaTeX , C, regular expressions, XML

Systems: MacOS, Linux, Windows, Git, Vim, Praat

Analysis: Logistic & linear mixed-effects regression, PCA, HMMs, hypothesis testing

Natural Languages: English (native, research), Japanese (beginner, research), French (beginner)

Teaching

Jan-April 2019	Teaching Assistant Phonetics	McGill University
Jan-April 2015	Teaching Assistant Introduction to Linguistics	McGill University
Sept-Dec 2014	Teaching Assistant Introduction to the Study of Language	McGill University

Last updated: March 5, 2019