Crowdsourcing for Speech Processing: Applications to Data Collection, Transcription and Assessment

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DESCRIPTION

Provides an insightful and practical introduction to crowdsourcing as a means of rapidly processing speech data

Intended for those who want to get started in the domain and learn how to set up a task, what interfaces are available, how to assess the work, etc. as well as for those who already have used crowdsourcing and want to create better tasks and obtain better assessments of the work of the crowd. It will include screenshots to show examples of good and poor interfaces; examples of case studies in speech processing tasks, going through the task creation process, reviewing options in the interface, in the choice of medium (MTurk or other) and explaining choices, etc.

- Provides an insightful and practical introduction to crowdsourcing as a means of rapidly processing speech data.
- Addresses important aspects of this new technique that should be mastered before attempting a crowdsourcing application.
- Offers speech researchers the hope that they can spend much less time dealing with the data gathering/annotation bottleneck, leaving them to focus on the scientific issues.
- Readers will directly benefit from the book's successful examples of how crowdsourcing was implemented for speech processing, discussions of interface and processing choices that worked and choices that didn't, and guidelines on how to play and record speech over the internet, how to design tasks, and how to assess workers.
Essential reading for researchers and practitioners in speech research groups involved in speech processing

ABOUT THE AUTHOR

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Dr. Eskenazi is Principal Systems Scientist at the Language Technologies Institute, Carnegie Mellon University, USA. She has authored over 100 scientific papers in the areas of computer assisted language learning and speech and spoken dialog systems. Her work has produced such systems as the Let's Go spoken dialog system and the REAP vocabulary tutor. She is also the founder and CTO of the Carnegie Speech Company.

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Dr. Levow is currently an Assistant Professor in the Department of Linguistics, University of Washington, USA. Prior to joining the faculty at the University of Washington, she served on the faculty at the University of Chicago in the Department of Computer Science and as a Research Fellow at the University of Manchester, UK. She served on the Editorial Board of Computational Linguistics and as Associate Editor of ACM Transactions on Asian Language Processing.

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Gabriel Parent is a Software Development Engineer at Amazon.com working on solving natural language related problems. His main research focuses were human-computer interaction through spoken dialog systems and crowdsourcing.

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