**Max Nelson**
manelson@umass.edu | 317-979-0837 | blogs.umass.edu/manelson

# Education

- **University of Massachusetts, Amherst** 2017-present
  Doctor of Philosophy in Linguistics *in progress*
- **University of Massachusetts, Amherst** 2020-present
  Master of Science in Computer Science *in progress*
  Coursework started 2018, official enrollment in Jan. 2020
- **Indiana University, Bloomington** 2012-2015
  Bachelor of the Arts in Cognitive Science with a minor in Linguistics
  Departmental Honors in Cognitive Science
  Thesis: *The perception of breathy voice in Gujarati*
- **Indiana University, Bloomington** 2012-2015
  Bachelor of the Arts in French
  Spring 2013 at Université d'Aix-Marseille, Aix-en-Provence, France

# Recognition

- Indiana University Provost's Award for Undergraduate Research 2016
- Indiana University Department of Cognitive Science Outstanding Undergraduate Research Award 2016
- Indiana University Hutton Honors College Undergraduate Research Grant 2015
- Indiana University Executive Dean's List 2015

# Skills

- Programming/scripting: Python (proficient); Java, R, MATLAB (familiar)
- Other: Phonological transcription, French, LaTeX, Praat

# Graduate coursework

Cognitive Modeling, Machine Learning, Deep Learning for Natural Language Processing, Algorithms for Data Science, Phonology, Phonetics, Syntax, Semantics

# Work Experience

- **Research Assistant**
  *University of Massachusetts, Amherst (Gaja Jarosz)* Aug 2018 - Jan 2019

  Wrote Python scripts implementing and testing algorithms for learning phonological hidden structure. Wrote Java script for plotting learning curves to be included in a publicly available Java application implementing phonological learning algorithms.

- **Editor** Aug 2018 - Dec 2018
  *Proceedings of the Society for Computation in Linguistics*

  Collect submissions, request edits, compile and publish final proceedings.

- **Editor** May 2017 - Oct 2018
  *Proceedings of the North East Linguistic Society*

  Create LaTeXand Microsoft Word templates for submissions, collect submissions and request edits, compile and publish final proceedings.

- **Sighted Assistant** Aug 2016 - May 2017
  *Indiana University Disabilities Services*

  Read academic journals aloud and interpret figures for a visually impaired Ph.D. candidate in linguistics.

- **Intern Linguist** May 2016 - Aug 2016
  *LINGUIST List*

  MATLAB scripting to analyze ultrasound data, including generating and smoothing 3D/4D figures.

- **Research Assistant** Dec 2013 - May 2017
  *Indiana University Phonetics and Phonology Lab*

  Wrote Python scripts for data collection, annotation, and analysis. Ran 3D ultrasound speech production experiments. Integrated and interpreted ultrasound, audio, and 3D scan data using a custom MATLAB toolkit.

# Publications

- Nelson, M., Dolation, H., Rawski, J., Prickett, B. (*to appear*). Probing RNN Encoder-Decoder Generalization of Subregular Functions using Reduplication. Proceedings of the Society for Computation in Linguistics: Vol. 3.
- Mayer C., Nelson M. (*to appear*). Phonotactic learning with neural language models. Proceedings of the Society for Computation in Linguistics: Vol. 3.
- Nelson, M. (2019). Word segmentation and UR acquisition with UR constraints. Proceedings of the Society for Computation in Linguistics: Vol. 2, Article 8.
- Berkson, K., Nelson, M. (2018). Phonotactic Frequencies in Marathi. Indiana University Linguistics Club Working Papers. Vol. 18, No. 2.
- Steven M. L., Malgorzata E. C., Nelson, M. (2017). Three-dimensional ultrasound images of Polish high front vowels. In Proceedings of Meetings on Acoustics 30.
- Nelson, M., Berkson, K., Khan, S. D., Esposito, C. (2016). Perception of Breathy Phonation in Gujarati. Proceedings of FASAL 6: 14-22.

# Selected Presentations

- Nelson, M. (2019). Learning and generalizing phonotactics with recurrent neural networks. Poster at the 7th Annual Meeting on Phonology. Stony Brook, New York.
- Nelson, M. (2019). Revisiting abstract underlying representations: Evidence from a learning model of probabilistic URs. Talk at the 27th Manchester Phonology Meeting.
- Prickett, B., K. Holladay, S. Hucklebridge, M. Nelson, R. Bhatt, G. Jarosz, K. Johnson, A. Nazarov, J. Pater (2019). Learning syntactic parameters without triggers by assigning credit and blame. Talk at the 55th annual meeting of the Chicago Linguistic Society.
- Lulich, S., Nelson, M., de Jong, K., Berkson, K. (2017). Anatomically oriented Principal Components Analysis of three-dimensional tongue surfaces. Poster presented at the 3rd joint meeting of the Acoustical Society of America and the European Acoustics Association. Boston, Massachusetts.
- Cavar, M., Berkson, K., Nelson, M., Cruz, H. (2016). Laminal sounds in San Juan Quiahje Chatino: A phonetic and 3D ultrasound study. Poster presented at the 21st Annual Mid-continental Phonetics and Phonology Conference. Michigan State University. East Lansing, Michigan.
- Lulich, S. M., Rhodes, B., Nelson, M., Berkson, K., de Jong, K. (2016). Three-dimensional tongue shapes of /r/ production in American English words. Poster presented at the 171st meeting of the Acoustical Society of America. Salt Lake City, Utah.