

## Work-Research Interests

Natural Language Processing, Machine Learning, Data Science

## Education

- **Ph.D., Computer Science, The Graduate Center, The City University of New York** [www.gc.cuny.edu](http://www.gc.cuny.edu)  
*New York, NY, USA* *Expected: 2018*
  - Advisor: Prof. Rivka Levitan, Prof. Andrew Rosenberg
- **M.S., Computer Science, Stony Brook University, SUNY** [www.stonybrook.edu](http://www.stonybrook.edu)  
*Stony Brook, NY, USA* *August 2012*
  - Transferred to a Ph.D. program at CUNY
- **M.S., Computer Science, Khmelnytsky National University of Ukraine** [www.khnu.km.ua](http://www.khnu.km.ua)  
*Khmelnytsky, Ukraine* *June 2007*
- **B.S., Computer Science, Khmelnytsky National University of Ukraine** [www.khnu.km.ua](http://www.khnu.km.ua)  
*Khmelnytsky, Ukraine* *June 2006*

## Work Experience

- **Research Assistant - Natural Language Processing, Machine Learning** [speech.cs.qc.cuny.edu](http://speech.cs.qc.cuny.edu)  
*Speech Lab, CUNY - New York, NY, USA* *Sept 2012 – Current*
  - Delivered software for DEFT, one of the most prominent projects at CUNY, funded by DARPA
  - Invented a new measure RankDCG for evaluation and comparison of rank-ordering algorithms
  - Created algorithms for user hierarchy detection in text communications
  - Developed stock market system to forecast price based on social media analysis and ensemble learning that produces an over 85% prediction rate
  - Designed new algorithms to improve named entity recognition in speech with 6% absolute improvement over state-of-the-art algorithms performance
  - Created algorithms for interpersonal relationship prediction in speech that achieve over 75% accuracy
  - Developed soft tree based machine learning algorithms for emotion detection in speech
- **Research Intern - Natural Language Processing, Machine Learning** [www.comcast.com](http://www.comcast.com)  
*Comcast Labs – Washington, DC, USA* *June 2016 – September 2016*
  - Developed voice based deep learning algorithm for speaker identification
  - Created a demo project and presented the product at Comcast headquarters
  - Delivered a scalable product with complete production integration
- **Research Assistant (advisor Prof. Y. Borodin)**  
*Artificial Intelligence Lab at Stony Brook University, SUNY – Stony Brook, NY, USA* *Jan 2012- Aug 2012*
  - Implemented multi-touch control algorithms for Hearsay project
- **Financial Web Portal - Software Developer** [www.epam.com](http://www.epam.com)  
*EPAM Systems – Kiev, Ukraine* *Nov 2007 – May 2009*
  - Optimized legacy code and algorithms to increase productivity and decrease execution time
  - Designed and implemented unit tests that provide full checks for stock trading operations
  - Conducted research on prospective technologies and led conferences for EPAM's employees

## Publications

- Denys Katerenchuk, "Age Group Classification with Speech and Metadata Multimodality Fusion," EACL, 2017, Valencia, Spain
- Denys Katerenchuk, Andrew Rosenberg, "RankDCG: Rank-Ordering Evaluation Measure," LREC, 2016, Portorož, Slovenia
- Denys Katerenchuk, Andrew Rosenberg, "Hierarchy Prediction in Online Communities," Student session, AAAI, 2016, Phoenix, AZ, USA
- Denys Katerenchuk, Andrew Rosenberg, "Improving Named Entity Recognition with Prosodic Features", Interspeech, 2014, Singapore
- Denys Katerenchuk, David Guy Brizan, Andrew Rosenberg, "Was that your mother on the phone?": Classifying Interpersonal Relationships between Dialog Participants with Lexical and Acoustic Properties", Interspeech, 2014, Singapore

## Teaching Experience

- **The Graduate Center, The City University of New York** ([www.gc.cuny.edu](http://www.gc.cuny.edu))
  - Advanced Natural Language Processing (TA, CSC 84010 - Ph.D. level course)
- **Hunter College, The City University of New York** ([www.hunter.cuny.edu](http://www.hunter.cuny.edu))
  - Advanced Applications: A Capstone for CS Majors (Adjunct Lecturer, CSCI 449)
  - Software Analysis and Design 3 (Adjunct Lecturer, CSCI 335)
  - Introduction to Computer Science (Adjunct Lecturer, CSCI 127)
- **Stony Brook University, The State University of New York** ([www.stonybrook.edu](http://www.stonybrook.edu))
  - Introduction to Java programming (TA, CSE 114)

## Committees

- The scientific committee for MASC-SSL 2016 (reviewer)
- The scientific committee for LREC2016 conference (reviewer)

## Invited Talks

- "Customizing the Experience for Kids using Speech and Usage," SANE2016, MIT, Boston, MA, USA
- "Hierarchy Detection in Online Communities," Amazon Graduate Research Symposium, 2015, Seattle, WA, USA
- "Who's the Boss?: Predicting Hierarchies in Online Communications," NYC Media Lab Summit, NYU, 2015, New York, NY, USA

## Technical Skills

- Programming Languages: Python, Java, C#, C/C++, R, SQL
- Tools: TensorFlow, Theano, Keras, scikit-learn, KALDI, NLTK, spaCy, Sun Grid Engine