

Nikolaos Aletras

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Current position

Applied Scientist, Amazon.com, Inc., Cambridge, UK

Research Interests

Natural language processing • Machine Learning • Computational lexical semantics • Topic models • Social media analysis

Professional Experience

- 2016-pres *Applied Scientist, Amazon.com, Inc., UK*
Project: Working on the next generation AI for the Alexa voice service that powers Echo devices.
- 2015 *Data Scientist (Consult.), SONR News Limited, UK*
Project: Information extraction from social media.
- 2015 *Research associate, University College London, UK*
Project: EPSRC IRC in early-warning sensing systems for infectious diseases (funded by EPSRC).
- Applied text mining and machine learning techniques on large amount of Twitter and search engines data to build early-warning systems for influenza-like diseases.
- 2014-2015 *Research associate, Advanced Computing Research Centre, University of Sheffield, UK*
Project: SenseMaking: Exploratory search for document collections (funded by Defence Science and Technology Laboratory).
- Built systems for automatically identifying topics being discussed in large document collections by applying topic modelling.
 - Developed techniques to identify semantically coherent topics.
 - Developed techniques to compute topic similarity.
 - Developed techniques to interpret topics by generating textual and image labels.

- 2011-2013 *Research assistant, University of Sheffield, UK*
Project: PATHS: Personalised access to cultural heritage spaces (funded by the EU).
- Developed a recommender system of a large cultural heritage repository by computing text similarity between cultural heritage objects.
- 2008-2010 Teacher of Informatics, Greece

Education

- 2011-2014 PhD in Computer Science, University of Sheffield, UK
 2010-2011 MSc in Advanced Computer Science, University of Sheffield, UK
 2002-2007 BSc in Computer Science, University of Crete, Greece

Key Publications

JOURNAL PAPERS

- 2015 D. Preoțiu-Pietro, S. Volkova, V. Lampos, Y. Bachrach, N. Aletras (2015). *Studying User Income through Language, Behaviour and Affect in Social Media*. PLOS ONE.
- 2015 N. Aletras, T. Baldwin, J. H. Lau and M. Stevenson (2015). *Evaluating Topic Representations for Exploring Document Collections*. Journal of the Association for Information Science and Technology (JASIST).
- 2015 A. Gonzalez-Agirre, N. Aletras, G. Rigau, M. Stevenson and E. Agirre (2015). *Why are these similar? Investigating item similarity types in a large Digital Library*. Journal of the Association for Information Science and Technology (JASIST).

CONFERENCE PAPERS

- 2016 V. Lampos, N. Aletras, J. K. Geyti, B. Zou, I. J. Cox (2016). *Inferring the Socioeconomic Status of Social Media Users based on Behaviour and Language*. In ECIR.
- 2015 D. Preoțiu-Pietro, V. Lampos and N. Aletras (2015). *An Analysis of the User Occupational Class through Twitter Content*. In ACL.
- 2014a N. Aletras, T. Baldwin, J. H. Lau and M. Stevenson (2014). *Representing Topics Labels for Exploring Digital Libraries*. In Digital Libraries 2014 (JCDL/TPDL).
- 2014b N. Aletras and M. Stevenson (2014). *Labelling Topics using Unsupervised Graph-based Methods*. In ACL (short).
- 2014c V. Lampos, N. Aletras, D. Preoțiu-Pietro and T. Cohn (2014). *Predicting and Characterising User Impact on Twitter*. In EACL.
- 2014d N. Aletras and M. Stevenson (2014). *Measuring the Similarity between Automatically Generated Topics*. In EACL (short).
- 2013 N. Aletras and M. Stevenson (2013). *Representing Topics Using Images*. In NAACL-HLT.

Full List: <http://nikosaletras.com/publications.html>

Skills

- **Programming Languages:**

- Python, Java, C, SQL, PHP, {HTML/XML}, \LaTeX

- **Software:**

- Machine Learning libraries: scikit-learn, gensim, theano, keras etc.
- NLP tools: NLTK, OpenNLP, StanfordCore
- Web developing: django
- Other tools: Hadoop, netwroxx, ipython, Matlab, MongoDB, Twitter API, Google Search API, Wikipedia API

Invited Talks

- 2016 *An Introduction to Topic Models*
Guest lecture at the University of Warwick
- 2016 *Predicting User Demographics in Social Networks*
Invited talk at the University of Warwick
- 2015 *Interpreting Document Collections with Topic Models*
Invited talk at the University of Melbourne
- 2015 *Interpreting Document Collections with Topic Models*
Invited talk at Amazon.com, Inc., Cambridge, UK
- 2015 *Interpreting Document Collections with Topic Models*
Invited talk at the NLP Seminar Series, Computer Laboratory, University of Cambridge

Grants, honors & awards

- 2016 “30 under 30” list of promising Greek Young Professionals, Kathimerini newspaper, Greece
- 2014 ACL 2014 Travel Award
- 2013 Pump-Priming Vision & Language Research (V&L Net: The EPSRC Network on Vision and Language)
- 2012 Google grant covering the registration in the Lisbon Machine Learning School (LxMLS 2012)
- 2011-2014 Departmental Research Studentship, University of Sheffield
- 2011 The Inspec Solutions Ltd. Prize for the “Best Overall Performance” in MSc in Advanced Computer Science, University of Sheffield

Professional Services

- 2016 *Reviewer*, EMNLP, NAACL, ACL
- 2015 *Organiser*, CIKM 2015 Workshop on “Topic Models: Post-processing and Applications”
- 2014 *Student Volunteer*, ACL 2014

2014 *Reviewer, EMNLP*
2013 *Reviewer, EMNLP*

Languages

Greek (native), English (fluent), French (basic).

References

Available on request.