Georgios Spithourakis

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RESEARCH INTERESTS

Machine learning, natural language processing, grounded language generation, neural networks, distributional semantics, structured prediction, forecasting.

EDUCATION

University College London
PhD Candidate in Computer Science   **2013-2017 (expected)**
Supervisors: Sebastian Riedel, Steffen Petersen
Project: Multimodal distributional semantics for understanding clinical language.

University College London
MSc in Computational Statistics and Machine Learning   **2012-2013**
Themes: Supervised & unsupervised learning | Information retrieval & data mining | Machine vision.
Dissertation Project**:** Column generation in loopy models. Supervisor: Sebastian Riedel

National Technical University of Athens
Diploma of Electrical & Computer Engineering (MSc equivalent, GPA: 8.58/10.0)   **2007-2011**
28th out of 325 in year of graduation, completed the 5-year programme in 4 years
Major: Telecommunications. Themes: Signals, control & robotics | Electromagnetic waves & telecommunications | Telecommunication systems & computer networks | Management & decision support systems.
Dissertation Project**:** Application of aggregate-disaggregate forecasting methodology to non-intermittent demand data. Supervisor: Vasilis Assimakopoulos.

RESEARCH EXPERIENCE

University College London
PhD Candidate   **2013-present**
Analysed clinical data to find correspondence of lexical terms to physical measurements.
Developed numerically grounded language models and evaluated on semantic error correction.

Amazon/Evi Technologies
Research Intern   **2016**
Question Answering

Microsoft Research
Summer Research Intern   **2015**
Conditional language modelling with neural networks

Forecasting and Strategy Unit, National Technical University of Athens
Research Associate   **2011-2012**
Analysed forecasting simulation system usage data to show improvements in student perceived learning.

Forecasting and Strategy Unit, National Technical University of Athens
Research Assistant/Software Engineer   **2009-2011**
Evaluated novel use of time series forecasting methods.
Developed web-based forecasting simulation system on which students ran course projects.

TEACHING EXPERIENCE

University College London, Dept. of Computer Science
Senior Teaching Assistant
Introductory Programming (postgraduate, taught by D. Mohamedally)   **(autumn) 2015**
Teaching Assistant
Object-Oriented Programming (undergraduate, taught by Dean Mohamedally)   **(spring) 2014, 2015**
Introductory Programming (postgraduate, taught by D. Mohamedally)   **(autumn) 2013, 2014**

Mobile App Design (postgraduate, taught by D. Mohamedally)   **(autumn) 2013, 2014, 2015**
Natural Language Processing (postgraduate, taught by Sebastian Riedel)   **(autumn) 2013-2016**

National Technical University of Athens, School of Electrical and Computer Engineering
Teaching Assistant
Forecasting Techniques (undergraduate, taught by Vasilis Assimakopoulos)   **(spring) 2010, 2011, 2012**
Final year projects (undergraduate, supervised by V. Assimakopoulos), two appeared in conferences   **2011, 2012**

PUBLICATIONS

Conferences

N. Mostafazadeh, C. Brockett, B. Dolan, M. Galley, J. Gao, **G. Spithourakis** and L. Vanderwende. Image-Grounded Conversations: Multimodal Context for Natural Question and Response Generation. arXiv preprint 2017.

G. Spithourakis, I. Augenstein and S. Riedel. Numerically Grounded Language Models for Semantic Error Correction. EMNLP 2016.

G. Spithourakis, S. Petersen and S. Riedel. Clinical Text Prediction with Numerically Grounded Conditional Language Models. EMNLP-LOUHI workshop 2016.

J. Li, M. Galley, C. Brockett, **G. Spithourakis**, J. Gao, B. Dolan. A Persona-Based Neural Conversation Model. *ACL*, 2016.

G. Spithourakis, S. Petersen, and S. Riedel. Harnessing the predictive power of clinical narrative to resolve inconsistencies and omissions in EHRs. 2nd Workshop on Machine Learning for Clinical Data Analysis, Healthcare and Genomics, NIPS 2014.

N. Theodorou, **G. Spithourakis** and V. Assimakopoulos. Investment portfolio management with trend forecasting methods. Paper presented at *the Operational Research Society Annual Conference (OR54)*, 2012.

E. Mountalas, **G. Spithourakis** and V. Assimakopoulos. Empirical application, evaluation and comparison of forecasting methods for the electrical system's System Marginal Price: a case study in Greek electricity market. In *Proceedings of the 23rd National Conference of the Hellenic Operational Research Society*, pages 9-13, 2012.

Journals

G. Spithourakis, F. Petropoulos, K. Nikolopoulos and V. Assimakopoulos. Amplifying the learning effect via a forecasting and foresight support system. *International Journal of Forecasting*, 31(1):20-32, 2015.

G. Spithourakis, F. Petropoulos, K. Nikolopoulos and V. Assimakopoulos. A systemic view of the ADIDA framework. *IMA Journal of Management Mathematics*, 25(2): 125-137, 2014.

F. Petropoulos, K. Nikolopoulos**, G. Spithourakis** and V. Assimakopoulos. Empirical heuristics for improving intermittent demand forecasting. *Industrial Management & Data Systems*, 113(5):683-696, 2013.

G. Spithourakis, F. Petropoulos, M.Z. Babai, K. Nikolopoulos and V. Assimakopoulos. Improving the performance of popular supply chain forecasting techniques: an empirical investigation. *Supply Chain Forum: an International Journal*, 12(4):16-25, 2012.

AWARDS & DISTINCTIONS

The Farr Institute of Health Informatics Research
Studentship for PhD   **2013-2016**

Foundation for Education and European Culture (IPEP)
Scholarship (financial support for MSc)   **2012-2013**

Estate of Panagiotis Triadafyllidis
Endowed scholarship (financial support for undergraduate studies, merit-based)   **2007-2011**

Eurobank EFG Group ("Great Moment for Education" Programme)
Honoured by the President of the Hellenic Republic for exceptional score in National Examinations **2008**
Award for ranking 1st in national examinations in local high school **2007**

SKILLS, ACTIVITIES & INTERESTS

Languages: Greek (Mother Tongue) | English (Excellent - C2) | German (Advanced - C1) |
Japanese (Intermediate - JLPT N3)

Programming Languages: python (tensorflow/theano), Scala, Java, VB.NET, C, MATLAB, R

Web Technologies: HTML/CSS, ASP.NET, AJAX, (My)SQL

Extracurricular Activities: Water polo | Volunteer in Welsh environmental programme (2012, two weeks) | Camp cabin leader (2007, three weeks) | Volunteering contribution to translation "Watashi no Hiroshima" ("My Hiroshima"), short story by Junko Morimoto (Japanese to Greek)