

# GEORGETA-CRISTINA GARBACEA

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## RESEARCH INTERESTS

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My research interests are focused on machine learning and natural language processing. I am particularly interested in deep generative models of natural language and their evaluation.

## EDUCATION

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**University of Michigan, Ann Arbor, USA** *Sep 2016 - Present*

Ph.D. in Computer Science & Engineering

Advisor: Prof. Qiaozhu Mei

**University of Amsterdam, The Netherlands** *Sep 2013 - May 2016*

M.Sc. in Artificial Intelligence, graduated “*cum laude*”

Advisors: Prof. Evangelos Kanoulas, Prof. Maarten de Rijke

**Transilvania University of Brasov, Romania** *Sep 2006 - July 2010*

B.Eng. in Electrical Engineering and Computers

Advisor: Prof. Carmen Gerigan

**Transilvania University of Brasov, Romania** *Sep 2006 - July 2009*

B.Sc. in Computer Science

Advisor: Prof. Eleonor Ciurea

## ACADEMIC RESEARCH EXPERIENCE

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**Foreseer Group, University of Michigan** *September 2016 - present*

*Graduate Student Research Assistant*

*Ann Arbor, MI*

Advisor: Prof. Qiaozhu Mei

Conducting research on deep generative models for natural language and their evaluation.

**Amsterdam Data Science Research Center** *April 2014 - May 2015*

*Graduate Student Research Assistant*

*Amsterdam, NL*

Advisors: Daan Odijk, Victor de Boer, Laura Hollink, Jacco van Ossenbruggen

We published a paper in TPD L 2015 on “Quantifying Historical Perspectives on World War II”.

## INDUSTRY RESEARCH EXPERIENCE

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**Google Deepmind** *May 2018 - September 2018*

*Research Intern*

*London, UK*

Advisors: Thomas C Walters, Aäron van den Oord, Oriol Vinyals

We published a paper at ICASSP 2019 on speech compression using VQ-VAE.

**Microsoft Research** *May 2016 - August 2016*

*Research Intern*

*Redmond, USA*

Advisors: Paul Bennett, Fernando Diaz

I joined the CLUES research group on the project “*Augmented Memory Intelligence*”, and worked on temporal and contextual retrieval of information from personal information stores.

**Microsoft Research** *June 2014 - Sept 2014*

*“Bright Mind” Research Intern*

*Cambridge, UK*

Advisors: Fahad Dogar, Thomas Karagiannis, Antony Rowstron

I joined the Systems and Networking research group on the project “*Analyzing OneDrive Performance*”.

I analyzed how OneDrive user requests travel through the data serving stack, and how different cache sizes and eviction algorithms affect the performance and latency of the cloud service.

## PUBLICATIONS

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### **Neural Language Generation: Formulation, Methods, and Evaluation**

**Cristina Garbacea** and Qiaozhu Mei

### **An Empirical Study on Explainable Prediction of Text Complexity: Preliminaries for Text Simplification**

**Cristina Garbacea**, Mengtian Guo, Samuel Carton and Qiaozhu Mei

### **Judge the Judges: A Large-Scale Evaluation Study of Neural Language Models for Online Review Generation**

**Cristina Garbacea**, Samuel Carton, Shiyang Yan and Qiaozhu Mei

In *Proceedings of the 2019 Conference on Empirical Methods in Natural Language Processing and the 9th International Joint Conference on Natural Language Processing (EMNLP-IJCNLP)* (pp. 3959-3972)

### **Low Bit-Rate Speech Coding with VQ-VAE and a Wavenet Decoder**

**Cristina Garbacea**, Aäron van den Oord, Yazhe Li, Felicia SC Lim, Alejandro Luebs, Oriol Vinyals and Thomas C Walters

In *International Conference on Acoustics, Speech and Signal Processing (ICASSP)*, pp. 735-739, 2019.

### **A Systematic Analysis of Sentence Update Detection for Temporal Summarization**

**Cristina Garbacea** and Evangelos Kanoulas

In *Proceedings of the 39th Conference on Information Retrieval (ECIR 2017)*, Aberdeen, UK.

### **The University of Amsterdam (ILPS.UvA) at TREC 2015 Temporal Summarization Track**

**Cristina Garbacea** and Evangelos Kanoulas

In *Proceedings of the 24th Text REtrieval Conference (TREC 2015)*, NIST, Maryland, USA.

### **Supporting Exploration of Historical Perspectives Across Collections**

D. Odijk, **C. Garbacea**, T. Schoegje, L. Hollink, V. de Boer, K. Ribbens, and J. van Ossenbruggen

In *Research and Advanced Technology for Digital Libraries (TPDL 2015)*, pp. 238-251, Poznan, Poland

### **Combining Multiple Signals for Semanticizing Tweets: U. Amsterdam at #Microposts2015**

**Cristina Garbacea**, Daan Odijk, David Graus, Isaac Sijaranamual, and Maarten de Rijke

In *Proceedings of the 5th Workshop on Making Sense of Microposts at WWW 2015*, Florence, Italy

### **Feature Selection and Data Sampling Methods for Learning Reputation Dimensions**

**Cristina Garbacea**, Manos Tsagkias, and Maarten de Rijke

In *Proceedings of Conference and Labs of the Evaluation Forum (CLEF 2014)*, Sheffield, UK

### **Detecting the Reputation Polarity of Microblog Posts**

**Cristina Garbacea**, Manos Tsagkias, and Maarten de Rijke

In *European Conference on Artificial Intelligence (ECAI 2014)*, Prague, Czech Republic

## TEACHING EXPERIENCE

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2019 - present: mentoring two students at undergraduate and master level, University of Michigan

2019: Lecturer at AI4ALL, University of Michigan

2019: Lecturer at Explore Engineering, University of Michigan

2006-2009: Teacher Qualification Certificate, Transilvania University of Brasov

## SUMMER SCHOOLS

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**2019** PAISS Summer School on Artificial Intelligence, INRIA Paris, France

**2019** Deep Learning and Reinforcement Learning, University of Alberta and AMII, Canada

**2019** Artificial Intelligence and Games, New York University, New York, USA  
**2018** Deep Learning and Reinforcement Learning, University of Toronto and Vector Institute  
**2015** European Summer School in Information Retrieval, Thessaloniki, Greece  
**2011** Functional Programming, Utrecht University, The Netherlands

## PROFESSIONAL EXPERIENCE

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2010 - 2013: Software Development Engineer, US Outsourcing, Brasov, Romania  
2009: Software Development Engineer Intern, Dynamic Ventures, Brasov, Romania  
2008: Software Development Engineer Intern, iQuest Technologies, Brasov, Romania

## AWARDS AND HONOURS

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2019: NSF Women in Machine Learning (WiML) Travel Award at NeurIPS 2019, Vancouver, Canada  
2019: Student Travel Award for attending NeurIPS 2019, Vancouver, Canada  
2019: Student Travel Award for attending EMNLP 2019, Hong Kong, China  
2019: Student Travel Award for attending ICML 2019, Long Beach, California  
2019: INRIA Travel Grant for attending PAISS Summer School on Artificial Intelligence, Paris, France  
2019: AMII Travel Grant for attending DLRL Summer School at University of Alberta, Canada  
2019: Unity Scholarship for attending GamesAI Summer School (5 scholarships awarded overall)  
2018: Self-Organizing Conference in Machine Learning (SOCML), Google Toronto, Canada  
2018: Vector Institute Travel Grant for DLRL Summer School at University of Toronto, Canada  
2018: CRA-W Grad Cohort Scholar, San Francisco, California, USA  
2017: Anita Borg Scholar at GHC 2017, Orlando, Florida, USA  
2017: Google Student Research Summit, Machine Intelligence track, San Bruno, California, USA  
2017: Student Travel Award for attending KDD 2017, Halifax, Nova Scotia, Canada  
2016: Rackham Graduate Fellowship, University of Michigan Ann Arbor, USA  
2015: Google EMEA "Anita Borg" Memorial Scholarship Finalist  
2015: ELIAS Scholarship for attending ESSIR 2015, Thessaloniki, Greece  
2014: ACM Travel Grant for attending ECAI 2014, Prague, Czech Republic  
2014: Microsoft "Bright Mind" Research Intern, Microsoft Research Cambridge, UK

## TECHNICAL STRENGTHS

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<b>Computer Languages</b>	Python, C#, Java, C/C++, MATLAB
<b>Frameworks</b>	Tensorflow, PyTorch, Keras, Scikit-Learn, Matplotlib
<b>Databases</b>	MSSQL, MySQL, MSAccess, ElasticSearch
<b>Tools</b>	Visual Studio, Git, Latex
<b>Platforms</b>	Linux, Mac OS X, Windows

## PROFESSIONAL SERVICE

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Reviewer: COLING 2020, WiML NeurIPS 2019  
Volunteer: ICLR 2020, ICML 2020, SIGIR 2020, KDD 2017