

# CURRICULUM VITÆ

SOPHIA KATRENKO

A dreamer, a thinker, and a doer.  
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## EXPERIENCE

**Head of Data Science** at DEUS, 10/2020-  
Amsterdam, the Netherlands

**Senior Manager Projects** at Cognizant (AI & Analytics), 02/2019-  
08/2020

Amsterdam, the Netherlands  
*presenting Cognizant's AI capabilities at commercial events and meetups (AIOps, prescriptive analytics) • cross-functional collaboration (engineering, strategy, design) • (hands on) demand forecasting to guide inventory optimisation for a global multinational corporation (EMEA); trend detection (computer vision); product recommenders*

**Head of Smart Content Capabilities** at Elsevier, 10/2016-  
12/2018

Amsterdam, the Netherlands  
*project lead for ML projects for Research Products: gathering requirements, planning, execution, stakeholder management, driving from PoC to productionalisation and going live (an example) • projects with internal stakeholders to improve content quality (Data Science squad lead; ETL and analysis on Databricks; Scrum), engaging with the 3rd party providers, reporting on KPIs • team management (NLD and IND)*

**Team Lead Data Science** at Elsevier, 04/2015-  
09/2016

Amsterdam, the Netherlands  
*tech lead (hands-on) within Research Products for commercial bibliometrics projects (30+ individual contribution, 100+ as a team) a year for EMEA, APAC, and AMER, meeting and exceeding financial targets (e.g., interdisciplinary research for HEFCE, UK: methodology and execution; International comparative performance of the UK research base 2016 for the Department for Business, Energy and Industrial Strategy, UK) • World university ranking • data for national assessments • team management (NLD and JPN)*

**Data Scientist** at Elsevier, 08/2014-  
03/2015

Amsterdam, the Netherlands  
*data extraction and analysis of bibliometric data (Scopus and external sources) • serving governmental and funding bodies*

|   |                      |
|---|----------------------|
| <b>Quantitative Analyst</b> at Capital Tool Company,<br>G-20 SME Finance Challenge winner<br>Amsterdam, the Netherlands<br><i>default prediction for SME and programming for the TREFI platform (Java, Weka, MySQL, shell scripting) • monthly product updates • time series analysis (R) • reporting to the World Bank</i> | 04/2013-<br>06/2014  |
| <b>Postdoctoral Researcher</b> at Utrecht University,<br>Utrecht, the Netherlands<br><i>“Between logic and common sense” NWO project • reasoning in language (Java) • publishing • teaching • student supervision</i>   | 2010 - 2013          |
| <b>Visiting Researcher</b> at University of Oslo,<br>Oslo, Norway<br><i>building a system for detecting inferences in text (Java)</i>   | 08 - 09/2011         |
| <b>Researcher</b> at University of Amsterdam,<br>Amsterdam, the Netherlands<br><i>research on information extraction (Java, Perl) • publishing • teaching</i>   | 2008 - 2010          |
| <b>PhD Researcher</b> at University of Amsterdam,<br>Amsterdam, the Netherlands<br><i>Adaptive Information Disclosure project (part of Virtual Lab e-science) • programming (Perl, Java) • publishing • teaching • collaboration with TNO and Wageningen Food &amp; Biobased Research</i>                                   | 2004 - 2008          |
| <b>Researcher</b> at Lviv Polytechnic University,<br>Lviv, Ukraine<br><i>research on resolving ambiguities in Ukrainian (Perl, XSLT)</i>  | 2002 - 2004          |
| <b>Visiting Researcher</b> at University of Tübingen,<br>Tübingen, Germany<br><i>Virtual Patient project (Perl) • morpho - syntactic disambiguation in German</i>   | 11/2002 -<br>11/2003 |
| <b>Visitor</b> at Bergakademie Freiberg,<br>Freiberg, Germany<br><i>literature review on vagueness and ambiguities in language</i>  | 01/2002              |
| <b>Freelance journalist</b> at Cnews<br><i>writing articles (IT, analytics)</i>   | 2001 - 2002          |
| <b>Analyst</b> at Golden Rain Advertising,<br>Lviv, Ukraine<br><i>IS design and implementation, predictive models in advertising</i>  | 1999 - 2001          |

## EDUCATION

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|--|------------|
| <i>PhD in Computer Science,</i><br>University of Amsterdam,<br>Amsterdam, the Netherlands  | 10.09.2009 |
| <i>Title: “A Closer Look at Learning Relations from Text”</i>  |            |
| <i>Supervisor: Prof. Dr. P. W. Adriaans</i>  |            |
| <i>Committee: Prof. Dr. Colin de la Higuera, Prof. Dr. Guus Schreiber, Prof. Dr. Peter Sloot, Prof. Dr. Maarten de Rijke, Prof. Dr. Bob Wielinga</i> |            |

|  |           |
|--|-----------|
| <i>MSc in Computer Science</i> (with distinction),<br>Department of Information Systems and Networks,<br>National University Lviv Polytechnics,<br>Lviv, Ukraine | 2000-2001 |
| <i>BSc in Computer Science</i> (with distinction),<br>National University Lviv Polytechnics,<br>Lviv, Ukraine  | 1996-2000 |
| School 8 with advanced course in German (with the highest distinction)<br>Lviv, Ukraine  | 1986-1996 |

## PARTICIPATION IN CHALLENGES

DevPost 2021 hackathon winner • Concrete Noun Categorization (2008, top performing system on 6-way classification) • Genic Interaction Extraction Challenge (2005) • 2nd Recognising Textual Entailment Challenge (2006) • BioCreative II (2006) • TREC Genomics (2007)

## TECHNICAL SKILLS

platforms: \*nix systems, Windows  
 languages: shell scripting, Python, Java, Perl, C++, Prolog  
 cluster-computing frameworks: Apache Spark  
 IDE: PyCharm, Eclipse, NetBeans  
 database management: MySQL, Amazon DynamoDB, MS Access  
 database design tools: DFD and ERD in ERWin  
 data mining/ML tools and libraries: libsvm, keras, tensorflow, scikit-learn, R, Weka (API)  
 cloud computing: AWS  
 version control: svn, Git  
 other: Scrum (Certified Scrum Master 2015), Databricks, Elasticsearch, XML, XSLT, HTML,  $\LaTeX$ , Microsoft Office

## RESEARCH INTERESTS

applied machine learning • explainable AI • sustainable ML

## AWARDS AND FELLOWSHIPS

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| Yggdrasil grant (29% selection rate; 26,000 NOK) | 2011      |
| EACL grant for participation in ESSLLI 2004      | 2004      |
| Volkswagen Foundation stipend                    | 2002/2003 |
| Leonhard Euler fellowship                        | 2001/2002 |
| Lviv Municipality Stipend                        | 1999      |

## SERVICE

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|---|-------------|
| Acting board member “AI in Industry”, Benelux Association for AI  | 2021 -      |
| Mentor at “Hack the crisis NL”  | 2020        |
| Mentor at Smart Tribe   | 2020        |
| Startup mentoring   | 2019        |
| Secretary of the Standing Committee of European Summer School in Logic, Language and Information,<br>held annually in a different European city • around 500 participants   | 2007 - 2018 |
| Reviewer for NLDB (2014, 2012), LREC (2020, 2018, 2014, 2012), ACL 2013, *SEM 2013, IEEE Transactions on Neural Networks and Learning Systems (2013), EACL Student Session 2012, PC CBMS 2012, PC Workshop on Relational Models of Semantics (RELMS) at ACL 2011, PC CogSci Conference 2010, IEEE CBMS (2010, 2009, 2008), HLIE workshop at ECML PKDD 2008, ESSLLI Student Session 2007, MICAI 2006 |             |

## ORGANIZATION

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|---|------|
| Belgian-Dutch Conference in Machine Learning,<br>together with Maarten van Someren and Pieter Adriaans<br>Amsterdam, the Netherlands          | 2007 |
| Organizer of ESSLLI Student Session, together with Janneke Huitink<br>Malaga, Spain   | 2006 |
| Co-organizer of the “Language and Computation” track<br>at ESSLLI Student Session 2005, together with Tamás Biró<br>Edinburgh, United Kingdom | 2005 |

## TEACHING

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|---|---------------------|
| Learning in Computational Linguistics (lecturer, UU)<br>student evaluation 2012: lecturer (overall)=4, lecturer (expertise)=4.5,<br>course content=4.3, increased interest in subject=4.5 (max=5) | 2011, 2012          |
| Taal- en spraaktechnologie (co-lecturer, UU)  | 2011, 2012          |
| Artificial Intelligence, Master in AI project (UvA)   | 2010                |
| Capita in Machine Learning, Language and Speech (UvA)   | 2009, 2008,<br>2007 |
| Language Learning (TA, UvA)   | 2007, 2006          |

## PUBLICATIONS (SELECTION OUT OF 30+ PUBLICATIONS)

### IN JOURNALS AND REFEREED PROCEEDINGS

Sophia Katrenko. *Could you make me a favour and do coffee, please?: Implications for Automatic Error Correction in English and Dutch*. In *Proceedings of the First Joint Conference on Lexical and Computational Semantics (\*SEM)*, 2012.

Sophia Katrenko, Pieter Adriaans, and Maarten van Someren. Using Local Alignments for Relation Extraction. *International Journal of Artificial Intelligence Research (JAIR)*, impact factor 1.981 (ISI Web), 38:1–48, 2010.

M. Roos, M. S. Marshall, A. P. Gibson, M. Schuemie, E. Meij, S. Katrenko, W.R. van Hage, K. Krommydas, and P.W. Adriaans. Structuring and Extracting Knowledge for the Support of Hypothesis Generation in Molecular Biology. *BMC Bioinformatics*, 10(Supplement 10), 2009.

Sophia Katrenko and Pieter Adriaans. A Local Alignment Kernel in the Context of NLP. In *Proceedings of the 22nd International Conference on Computational Linguistics (Coling)*, Manchester, UK, 2008. [25% acceptance rate].

Sophia Katrenko and Pieter Adriaans. Semantic Types of Some Generic Relation Arguments: Detection and Evaluation. In *Proceedings of the 46th Annual Meeting of the Association for Computational Linguistics: Human Language Technologies (ACL/HLT)*, Columbus, USA, 2008. [26,8% acceptance rate].

#### THESES

Sophia Katrenko. *A Closer Look at Learning Relations from Text*. PhD thesis, University of Amsterdam, the Netherlands, 2009.

Sophia Katrenko. *An Information System in the Advertising Branch*. Master's thesis, National University Lviv Polytechnics, Ukraine, 2002.

#### EDITED VOLUMES

Janneke Huitink and Sophia Katrenko, editors. *Proceedings of the ESSLLI 2006 Student Session*. Malaga, Spain, 2006.

Pieter Adriaans, Sophia Katrenko, and Maarten van Someren, editors. *Proceedings of the Dutch-Belgian Conference on Machine Learning*. Amsterdam, the Netherlands, 2007.

#### NATURAL LANGUAGES

Ukrainian (*native*) • English (*fluent*) • Dutch (*very good*, passed Korte Vrijstellingstoets in 2010) • German (*fluent*, 10 years at school - from primary to high school, subjects: Deutsche Sprache, Deutsche Literatur, Landeskunde, Marketing, and Technische Übersetzung) • Polish (*very good*)

September 4, 2021