

Residence: Antwerp, BE

VLADIMIR DZYUBA, PhD

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Data scientist with industrial & academic experience and consulting background

Employment

Research engineer **Flanders Make, Belgium** **10/2017–present**

Applied research on innovative data science applications in manufacturing

- Assessing quality of instructions via monitoring assembly with cameras and other sensors (ongoing)
- Identifying the most impactful machine failures by analyzing logs & natural-language technician notes
- High-level programming of traffic regulations for autonomous vehicles (proof-of-concept)

Doctoral researcher **KU Leuven, Belgium** **09/2012–06/2017**

- Defended a PhD thesis “Mine, Interact, Learn, Repeat: Interactive pattern-based data exploration,” which proposes one of the first interactive pattern mining frameworks that leverages such techniques as preference learning, active learning, and weight constrained combinatorial sampling
- Published 8 articles on interactive data mining & sports analytics, including one Best Paper Award
- Teaching assistant for 2 graduate courses; (co-)supervised 7 master theses, one leading to a publication

Tech.consultant/developer **IBS, Russia** **06/2009–09/2011**

Design and implementation of data warehouses and business intelligence applications (Oracle stack)

- Full range of responsibilities, from stakeholder interviews to data modelling to dashboard development
- Projects: debt collector (operational dashboards), maritime traffic authority (dashboards & maps)

Analyst **LANIT-Consulting, Russia** **03/2008–06/2009**

Design and implementation of financial applications (Oracle/Hyperion stack)

Education

Leuven, Belgium **KU Leuven – PhD** **2011–2017**

- Doctor of Engineering Science (PhD): Computer Science (June 2017)
- Advanced Masters in Artificial Intelligence (September 2012), *magna cum laude*

Moscow, Russia **NRU HSE – MSc** **2004–2010**

- Master in Business Informatics (June 2010), *with honours*
- Bachelor in Business Informatics (June 2008), *with honours*

Certifications & awards

- **Best Paper Award** at IEEE ICTAI 2013 conference (out of 299 submissions), Washington DC, USA
- **Student Travel Award** at PAKDD 2017 conference (one of 11), Jeju Island, South Korea
- **Certifications:** Java SE 6 (09/2011), Oracle BI Foundation 10 (04/2011), Hyperion Planning 9.3 (06/2008)

Programming languages & technologies

- Strong command of Python, Scala, SQL, Java 7, shell scripting, Git, and LaTeX
- Databases: PostgreSQL, SQLite (before: Oracle, Essbase)

Languages

- **Fluent:** Russian (native speaker), English (IELTS – 8.0, 2008)
- **Basic:** Dutch (*NT2 richtgraad 1* – 83%, 2015), German (*Goethe-Zertifikat B2* – 94%, 2008), French

Example projects

- **Forecasting sports tournaments** (2017): summer school project with four high-school students [\[link\]](#)
- **Analysis of the peer review process** (2014): poster from the organizers of IDA 2014 [\[link\]](#)

Publications

Journal articles

- J2 Dzyuba, van Leeuwen, De Raedt (2017). *Flexible constrained sampling with guarantees for pattern mining*. Data Mining and Knowledge Discovery (DMKD). ECML/PKDD journal track (oral presentation).
- J1 Dzyuba, van Leeuwen, Nijssen, De Raedt (2014). *Interactive learning of pattern rankings*. International Journal on Artificial Intelligence Tools (IJAIT).

Conference papers

- C6 Ukkonen, Dzyuba, van Leeuwen (2017). *Explaining deviating subsets through explanation networks*. ECML/ PKDD.
- C5 Dzyuba, van Leeuwen (2017). *Learning what matters – Sampling interesting patterns*. PAKDD (oral presentation). One of 11 **Student Travel Award** recipients.
- C4 Decroos, Dzyuba, Van Haaren, Davis (2017). *Predicting soccer highlights from spatio-temporal match event streams*. AAAI (poster).
- C3 Van Haaren, Dzyuba, Hannosset, Davis (2015). *Automatically discovering offensive patterns in soccer match data*. IDA (oral presentation).
- C2 Dzyuba, van Leeuwen, Nijssen, De Raedt (2013). *Active preference learning for ranking patterns*. IEEE ICTAI (oral presentation & poster). **Best Paper Award** (out of 299 submissions).
- C1 Dzyuba, van Leeuwen (2013). *Interactive discovery of interesting subgroup sets*. IDA (oral presentation).

Workshop papers

Decroos, Van Haaren, Dzyuba, Davis (2017). *STARSS: A spatio-temporal action rating system for soccer*. MLSA workshop at ECML/PKDD.

PhD thesis

Dzyuba (2017). *Mine, Interact, Learn, Repeat: Interactive pattern-based data exploration*. KU Leuven. De Raedt (supervisor), van Leeuwen (co-supervisor).

Other talks and presentations

- *Mining soccer data* (2016). DTAI Seminar, KU Leuven.
- *Mine, Interact, Learn, Repeat* (2016). Guest lecture for Data Mining course, University of Antwerp.
- *Interactive pattern mining* (2015). Reading Seminar in Fraunhofer-IAIS, Germany.
- *Analysing IDA 2014 reviewing process* (2014). PhD poster at IDA 2014 conference.
- *Interactive pattern mining: Mine, Interact, Learn, Repeat* (2014). DTAI Seminar, KU Leuven.

Professional service

- **Reviewing:** journals – *Data Mining and Knowledge Discovery*, *Machine Learning*; conferences – KDD 2016, ICDM 2014 (as a subreviewer); workshops – ECML/PKDD sports analytics workshop MLSA 2015–2018
- **Organization:** IDA 2014 conference (Leuven, Belgium) – webmaster and member of the local team

Teaching (at KU Leuven, Belgium)

- **Teaching assistant:** Machine Learning and Inductive Inference (2012–2016), Data Mining (2014–2016).
- **Thesis supervision:** a daily supervisor for seven master theses in Masters of Computer Science (CW), Applied Informatics (TI), and Artificial Intelligence (MAI). Thesis work by Tom Decroos, co-supervised with Jan Van Haaren and Jesse Davis (promotor), was published in AAAI 2017.