Jerzy (Jurek) **Błaszczyński**

AI/ML Researcher, Software Developer

contact information

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webpage
LinkedIn
publications
github

languages

polish/english/french

specialties

data analysis, machine learning, ensemble classifiers, decision rules, Java, Python, R, SQL, algorithms, preference learning, multicriteria decision analysis

summary

I am a researcher with over 15 years of experience in data analysis, construction and application of predictive models in wide set of domains including medicine, chemistry, economics, security, and networks. I am also a software developer with expertise in design and implementation of various parts of software projects using different frameworks. I have thorough understanding of methods of data analysis from both theoretical point of view, as well as, effective application. I tend to prefer interpretable models. I also have skills in technical analysis and design of software.

experience

since 2010 **Assistant Professor** — Poznań University of Technology, Poland

Research within the Laboratory of Intelligent Decision Support Systems:

- Preference Learning and Multicriteria Decision Analysis
- Machine Learning
- Artificial Intelligence in Medicine
- Granular and Soft Computing
- Decision Support
- Data Mining and Knowledge Discovery

Teaching activities: Decision Support Systems, Data Analysis and Statistics.

2017-2019 **Researcher, Software Developer** — Poznań Supercomputing and Networking Center, Poland

PROTECTIVE project: construction of ranking (ordinal classification) of security alerts which is used by computer security incident response team's (CSIRT). Ordinal classification is obtained by rule models implemented in ruleLearn library, which is developed as part of this project.

Technologies used: Java, spring, github, Gradle, JitPack, Docker, Liquibase.

2016-2017 **Machine Learning Researcher** — Poznań Supercomputing and Networking Center, Poland

Internal Brocade project IPA (Inteligent Platform for Anomaly detection): detection of network traffic anomalies and DDoS in POZMAN network using various machine learning approaches including deep learning with adversarial examples.

Technologies used: Python, scikit-learn, TensorFlow, Keras, Cleverhans, Apache Spark, github, Docker.

2003-2010 **Research Assistant** — Poznań University of Technology, Poland

Laboratory of Intelligent Decision Support Systems. Main research topics: decision rule and decision tree ensembles in classification; variable consistency extensions of dominance-based rough set approach; knowledge discovery with decision rules models.

- Participation as a designer and an investigator in Wielkopolska Center of Telemedicine project.
- Design and implementation of parts of software library java Rough Sets (jRS) and IDE for this library called jMAF.
- Participation as a developer and an investigator in Telesfor project aimed at supporting telemedical consultations at Microsoft Innovation Center in Poznan.

2004 **Research Visitor** — University of Ottawa, Canada

Working on decision rule models (classifiers) for decision support of emergency triage as part of Mobile Emergency Triage (MET) project.

Technologies used: Java, WEKA, R project.

2003 **Participant in Young Scientists Summer Program** International Institute for Applied Systems Analysis (IIASA), Laxenburg, Austria
Working on ordinal classification with monotonicity constraints models.

2002-2003 **Software Developer** Poznań Supercomputing and Networking Center, Poland
Working on development of networking applications in Java as part of 6NET project.

2001-2002 **Software Developer** Tonet S.A., Poznań, Poland
PHP and SQL programming, GUI design, database design, requirements engineering.

education

06.2010 **Ph. D., Computer Science (with honours)** Poznań University of Technology, Poland
Rule Models for Ordinal Classification in Variable Consistency Rough Set Approaches.

2000–2002 **M. Sc., Computer Science** Poznań University of Technology, Poland
MedAssist - Medical Applications of Decision Rule Models. Specialization in Intelligent Decision Support Systems. Last semester of master studies at *Université Paris Dauphine* in France - Socrates/Erasmus student exchange program.

projects

since 2017 **Software framework for explanatory modeling of big data (LUCID)** National Centre for Research and Development, Poland
DZP/TANGO2/396/2016, my position: investigator.

2014-2017 **Learning classifiers from imbalanced and evolving data** National Centre for Research and Development, Poland
DEC-2013/11/B/ST6/00963, my position: main investigator.

2008-2011 **Computer methods for decision support based on knowledge models induced from alfanumerical and text data** Ministry of Science and Higher Education, Poland
N N519 314435, my position: investigator.

2005-2007 **Intelligent decision support systems based on knowledge induced from data** Ministry of Science and Higher Education, Poland
3 T11F 021 27, my position: investigator.

awards

2017 **Award for Didactic Achievements** Poznań University of Technology, Poland

2013, 2015, 2016 **Award for Scientific Achievements** Poznań University of Technology, Poland

2011 - 2013 **Ministry of Education Scholarship for Outstanding Researchers** Ministry of National Education, Poland

2011 **Polish Academy of Sciences Award for PhD Dissertation** Polish Academy of Sciences

publications

I co-authored over 50 scientific articles. Please take a look at my list of publications for details. I have obtained the best paper awards at International Conference on Computer Recognition Systems (CORES) in 2013, and at Joint Rough Set Symposium (JRS) in 2012, and in 2013.