

Curriculum Vitae

PERSONAL DATA

Name: Mykola Pechenizkiy **Office:** MF7.099. Information Systems Group
Date of Birth: July 10, 1979 **Department of Computer Science (CS)**
Place of Birth: Kharkiv, Ukraine **Eindhoven University of Technology (TU/e)**
Nationality: Ukraine **P.O. Box 513, 5600 MB Eindhoven**
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EDUCATIONAL QUALIFICATIONS

2012-2013: University Teaching Qualification, (BKO) TU Eindhoven
2002-2005: PhD in Computer Science, Dept. of Computer Science and Information Systems,
University of Jyväskylä, Finland
Thesis: “*Feature Extraction for Supervised Learning in Knowledge Discovery Systems*”
2000-2001: MSc in Mobile Computing, Dept. of Mathematical Information Technology,
University of Jyväskylä, Finland
Thesis: “*PCA-based Feature Extraction for Classification*” (Excellent Thesis Award)
2000-2001: MSc in Computer Science, National University of Radioelectronics, Kharkiv, Ukraine
Thesis: “*Online Adaptive Computerized Testing*” (Diploma with Distinction)
1996-2000: Bachelor in Computer Science, Department of Software Engineering,
National University of Radioelectronics, Kharkiv, Ukraine (Diploma with Distinction)

PROFESSIONAL CAREER

2015-today Associate Professor in Predictive Analytics, Dept. of Computer Science, TU/e
2006-2015: Assistant Professor at Web Engineering group, Dept. of Computer Science, TU/e
(permanent position since October 2009)
2013-today: Adjunct Professor in Data mining for Industrial Applications, Dept. of Math. Information
Technology, University of Jyväskylä, Finland (0.0 fte, joint supervision of PhDs)
2006: Researcher (after obtaining PhD; 9 months) Dept. of Mathematical Information
Technology, University of Jyväskylä, Finland
2002-2005: Research assistant, Dept. of Computer Science & Information Systems, University of
Jyväskylä, Finland
2001-2002: Software developer/System architect, Niilo Mäki Institute, Finland

VISITING RESEARCH STAYS

Extended stays (> 1 week) New York University; Columbia University, NYC; School of Information, University of
California, Berkeley; Lytics Lab and MOOClets, Stanford University; Institute of Comp.
Science and Polish Academy of Sciences, Warsaw; Aalto University, Finland; LIAAD,
University of Porto; University of Bournemouth, UK; Simon Fraser University, Canada;
University of Alberta, Canada. (10 months overall since 2006, including sabbatical 2014)
Short visits (≤ 1 week) Search Labs, Microsoft Research Silicon Valley; CLUES, Microsoft Research Redmond;
Facebook HQ, CA; Yandex offices in St. Petersburg and Moscow; University of Sydney;
NTU, Singapore; University of Cordoba, Spain (~1 months in total)
During PhD Trinity College Dublin, Ireland; NIKEL, University of Ulster, UK (5.5 months in total)

FUNDED RESEARCH PROJECTS

Project leader	CAPA	(2011-2016)	STW Open competition	427k €
	CoDaK	(2011-2013)	NL Agency subsidy	185k €
	HaCDAIS	(2008-2012)	NWO Open competition	208k €
	CurriM	(2012)	Surf Learning Analytics Call	15k €
Co-applicant	WiBAF	(2013-2017)	Part of DSC/e Impulse I	~200k€
	CustomerJourney	(2014-2018)	Part of DSC/e Impulse II	~200k€
	Stress@work	(2011-2012)	EIT ICT Labs	~150k€
	LADA	(2013-2014)	Surf Learning Analytics Call	15k €
	GAF	(2008-2012)	NWO Open competition	208k €
Coordinator	IDEAS	(2012-2014)	Erasmus Mundus: Innovation & Design for Euro-Asian Scholars	~100k €
Package leader	PRM & MIP	(2009-2010)	KWR, NL Agency	~200k €
Project team member	COMPASS	(2009–2013)	NWO Open competition	450k €
	GRAPPLE	(2008-2011)	EU FP7 STREP	5.3M €
	CFBBoiler	(2005-2006)	EU RFCS	~100k €
External expert	KEELI & II	(2009-2014)	Spanish Ministry of Science	PhD stud.
	LA&EDM	(2013-2017)	U. Porto Learning Analytics	PhD stud.
Scholarship	4 years of PhD	(2002-2005)	COMAS Graduate School	~160k €

SUPERVISION OF POSTDOC, PHD, PDENG AND MASTER STUDENTS

Since joining TU/e in 2006 I have been involved in guiding 11 PhD students (prof. dr. Paul De Bra has been acting as promotor and I as co-promotor), 5 postdocs, 3 PDEngs, and 30+ BIS and CSE masters:

Completed PhDs	2012: Evgeny Knutov, Jorn Bakker, David Smits, 2014: Vinicius Ramos
Ongoing PhDs (planned year of completion)	Alexandr Maslov (2015) (2 nd promotor Tommi Karkkainen), Julia Kiseleva (2016), A. Montes Garcia (2017), Zhang Jianpeng (2018), Silvia B. De Marchi (2018) (2 nd promotor Milan Petkovic); part-time: Erik Tromp (2019), Guido Budziak (2019)
Postdocs	Anne Driemel (2014; 9 months), Jeroen De Knijf (2012-2013), Indre Zliobaite (2010; 9 months); with George. Fletcher: Evgeny Knutov (2012-2013), Wauter Bosma (2011)
PDEngs	Panagiotis Thomaidis (2014), Fanis Grollios (2012), Catharina Ibrahim (2011)
MSc	30+ graduation and internship projects, including <ul style="list-style-type: none"> – 15 projects in collaboration with industry (Philips, ASML, Adversitement, Studyporals, Kliknieuws, Multiscope, Sligro, Teezir, C-Content). – 3 projects in collaboration with other faculties (EE, IE&IS), and – 2 with other universities University of Aalto and Open University Heerlen. – 5 projects results in one or more conference publications. – 4 students started PhDs (E. Tromp, G. Budziak, T. Bagautdinov, L. v. Meeuwen). – 1 project (by E. Tromp) won two awards: De Koninklijke Hollandsche Maatschappij der Wetenschappen and Berenschot thesis award. – A complete list is available at http://www.win.tue.nl/~mpechen/projects/#thesis

TEACHING EXPERIENCE

Since 2006 I have been developing and teaching several regular courses as a responsible lecturer.

Most of my experience is in (re)designing and delivering two master level courses (60-80 students on average): *Web Information Systems* and *Web Information Retrieval and Data Mining*. Both courses have been appreciated by the students (8.2 and 7.5 out of 10 overall, 4 out of 5 for knowledge transfer and raising enthusiasm). I also enjoy giving *Web Engineering Seminar* for students planning to do their graduation projects in our group. It is a great opportunity to introduce students into the research world.

Besides Master level courses, I have been also designing and teaching bachelor (*Web Analytics*), post-master (*Database Technology*) and PhD level (part of the SIKS course on Process Mining and Data Mining) courses. I was invited to give intensive courses and tutorials on several topics in predictive analytics at U. Maastricht, OU Heerlen, international conferences and Big Data summer school. Thus, besides regular courses spread over a quartile or a semester, I have been designing and teaching a few intensive courses (from 1 day to 2 weeks), and giving half-day tutorials at the conferences.

I have experienced different ways of organizing the courses and engaging students into the learning process, making it more fun and rewarding, balancing theory and practice. I developed also new effective and efficient forms of assessment: online exams with learning management systems, and a new form of group project assessment - demo and poster presentations, including peer evaluation of other projects.

Serving on the Educational committee (BIS, 2013-2014) and Examination committees (CS, CSE and BIS, 2014-now) gave me an important experience of guarding the quality of education and its assessment at the department level.

More detailed information about my teaching experience and competences is available in my BKO portfolio, available upon a request.

RESEARCH IN THE PAST 5 YEARS

My main background is in *predictive analytics* and *application-needs-driven data mining*, one of the core areas of *data science*. I study how to develop the next generation of predictive analytics facilitating and improving the performance of various types of information systems used in industry, business, medicine, health and educational domains. The core research has been focused at three subject areas:

- Handling concept drift in predictive analytics aiming to make sure that predictive models stay up to date, and that they can react quickly to explicitly not observed changes.
- Discovering and integrating contextual knowledge in predictive analytics to guide the model induction process and to obtain simpler and more accurate contextual predictive models.
- Uplift prediction or predicting causal effects at global and individual levels based on data collected from the controlled and semi-controlled experiments including e.g. clinical trials in medicine and A/B testing in Web analytics.

Visibility. My research contributed to increasing the *visibility* of TU/e in several areas, including the strategic areas Health, Energy and Data Science. Concrete examples include:

- in *Health and Medical Informatics* – PC chair of IEEE CBMS’11, general co-chair of CBMS’13; Steering committee chair, organizing focused workshops and special issues, taking active part in Stress Analytics and Remote Patient Management projects with industry;
- in *Educational Data Mining and Learning Analytics* – EDM’11 general chair, EDM’15 PC chair, co-editor of the first handbook, guest editor of a special issue on EDM, President of IEDMS for 2015-2017;
- in *Web analytics* – focus on predictive analytics in the STW CAPA, social media analytics (E. Tromp won two awards: the [Best IT-thesis of the Netherlands 2011](#) granted by De Koninklijke Hollandsche Maatschappij der Wetenschappen and [Berenschot thesis award](#));
- in *Energy* – knowledge discovery from sensor data (from new types of boilers, collaboration with VTT, Finland), and knowledge extraction, construction and management from energy project reports (NL Agency).

I co-organized several scientific events and gave several invited talks and tutorials at different occasions, including workshops, conferences, industry events and faculty seminar series (detailed in the professional activities).

Connecting research and valorization. I devote significant efforts into the valorization of research results, including e.g. R&D projects in collaboration with and co-funded by industry or organizing the industry track at conferences. The success of valorization should be attributed in the first place to knowledgeable postdocs and several talented master (and then becoming part-time PhD) students I have guided. Former students E. Knutov, E. Tromp and G. Budziak have started their own companies based on the gained research and R&D experience. J. Kiseleva did internships with Booking.com and MSR.

PROFESSIONAL ACTIVITIES

- TU/e** 2012-2013: Member of the Educational committee OC BIS
2014-today: Member of the Examination committee EC BIS and EC CSE
- Professional positions** 2015-2017: President-elect of the Int. Educational Data Mining Society (IEDMS)
2012-2016: Chair of the Steering Committee IEEE CBMS Conference series
- Invited speaker** In 2015: Invited talks at HPCS15, ML4Ed@ICML15. In 2014: Visiting faculty talks in industry labs: Facebook, Menlo Park; Search Labs, Microsoft Research Mountain View; invited seminar talks in MOOCLets @Barnum, Stanford U.; Learning Analytics Seminar Series, TC U.Columbia, NYC; Stern School of Business, NYU; U.Jyväskylä; KDIS, U.Cordoba; ML colloquium series, TU Delft. In 2013-2011: Microsoft Research Redmond; Summer School “Learning with Big Data”, Tunisia; Healthcare Information Management forum, Philips Research, HTC; LIAAD, U. Porto; HIIT seminar, Aalto University, Helsinki; Workshop “Sentiment Discovery from Affective Data” (ECMLPKDD’12), Bristol; Learning Analytics Workshop 2011, Surf
- Tutorialist** Summer School “Learning with Big Data’13”, Tunisia; ECMLPKDD’12, Bristol, UK; PAKDD’11, Shenzhen, China; CBMS’10, Perth, Australia; ECMLPKDD 10, Barcelona
- Editorial boards** Journal of Educational Data Mining (JEDM), associate editor 2012-2017
Journal of Data Mining and Knowledge Discovery (DAMI) since 2014
- Guest editor** S.I. “Sparks of the Learning Analytics Future”, Journal of Learning Analytics 1(3), 2015
S.I. “Handling Concept Drift in Adaptive Information Systems”, Evolving Systems, 2013.
S.I. “Educational Data Mining”, SIGKDD Explorations 13(2), ACM, 2011
S.I. “KDD & computer-based decision support in biomedicine”, AIIM, 50(1), 2010.
S.I. "Biomedical Data Mining", Data & Knowledge Engineering, 68(12), Elsevier, 2009.
- Reviewer for journals** Springer’s Machine Learning, Data Mining & Knowledge Discovery, KAIS, UMUAI, Evolving Systems; Elsevier’s AIIM, IJAIED, EAAI, Information Sciences, Information Systems, Information Fusion, DKE, KBS, Pattern Recognition Letters; IEEE TKDD, TITB, TBE, TPAMI, TLT, TNNLS, Communications Magazine; IDA, IMIA, SADM (Wiley).
- General chair** IEEE CBMS’13, EDM’11
- PC chair** EDM’15, LASI’14, IEEE CBMS’12, BNAIC’09 (Industry track)
- Local chair** DHDHD’10, DBDBD’07, BNAIC’09, LOIS PMDM’09,
- Workshop chair** HaCDAIS@IEEE ICDM’11; HaCDAIS@ECMLPKDD’10
LMDS@ AIME’11; DAH@HT’2011, WABBWUAS@UMAP’10, PMKD’06,
ADML@EC-TEL’07, EDM@ICALT’07, IPM@ECMLPKDD’08
- Tutorials chair** ECMLPKDD’15, ADBIS12, ACM HT 2011
- PC member** AIS ICIS’14-15 (senior PC), UMAP’12-13, DS’11-14, ICDM 09-13, EDM’09-14:
ECML/PKDD’08-15 (2015: area chair); IDA’09-14: ACM SAC ’11-14: Benelearn’11-15,
BNAIC’10-14, DPADM’12, IJCAI’11, IEEE CBMS’05-14 (senior PC, track chair), IEEE ISDA’06, IEEE PMKD’05,’06, AAAI’10, HAIS’10, DMBiz’06,’07 SUEMA’07-08;
reviewer for KDD’07, KDD’11, SDM’09
- Research grants evaluator** NWO Open Competition, FONDECYT Program, Chile; Austrian Science Fund FWF, National Institute of Education, Singapore; Knowledge Foundation, Sweden; Academy of Finland; SSHRC Research Council of Canada.
- PhD thesis evaluator, reviewer, opponent or jury member** Jafarpour Khameneh, École Polytechnique de Montréal; Yun Zhou, U. Melbourne;
Leonardo Onofri (U.Bio-Medico di Roma, Italy); Hoang Thanh Lam (TU/e, with honors); Petr Kosina (U. Masaryk, Czech Republic); Alexander Semenov (U. Jyväskylä, Finland); Vilaythong Southavilay (U. Sydney, Australia); Khurum Nazir Junejo (U. Lahore, Pakistan); J.M. Luna (U. Cordoba, Spain, with honors); Rajalakshmi R (U. Anna Chennai, India); M.M. Abdelsamea (IMT Lucca), O.P. Rinta-Koski PhLic thesis (U. Aalto, Finland)

PUBLICATIONS

- Over 100 peer-reviewed publications in journals, conferences and workshops. These include several publications in the leading journals and conferences in the field, e.g.: ACM Computing Surveys, IEEE TKDE, SIGKDD Explorations, KAIS, ECMLPKDD, IEEE ICDM, IJCAI and more specialized journals, e.g. Information Fusion, IEEE Neurocomputing, IEEE TNNLS, IEEE TITB, and IDA among others.
- 20 edited volumes, including book, special issues in journals, conference proceedings, and workshop proceedings;
- Citation indices according to Google Scholar (5 January 2015):

	All	Since 2010
Citations	2023	1608
h-index	23	20
i10-index	46	35

Five representative papers:

- Gama, J., Žliobaite, I., Bifet, A., Pechenizkiy, M. & Bouchachia, A. (2014) A Survey on Concept Drift Adaptation, ACM Computing Surveys 46(4)
- Ang, H., Gopalkrishnan, V., Žliobaite, I., Pechenizkiy, M. & Hoi, S. (2013) *Predictive Handling of Asynchronous Concept Drifts in Distributed Environments*, IEEE Transactions on Knowledge and Data Engineering, 25(10): 2343-2355
- Žliobaite, I., Bakker, J. & Pechenizkiy, M. (2011) *Beating the baseline prediction in food sales: How intelligent an intelligent predictor is?* Expert Systems with Applications 39(1), pp. 806-815
- Pechenizkiy, M., Bakker, J., Žliobaite, I., Ivannikov, A. & Kärkkäinen, T. (2009) *Online Mass Flow Prediction in CFB Boilers with Explicit Detection of Sudden Concept Drift*, SIGKDD Explorations, 11(2), pp. 109-116.
- Zliobaite I., Pechenizkiy M. (2013) *Predictive User Modeling with Actionable Attributes*. CoRR abs/1312.6558 (follow up is under revision for Decision Support Systems)

Preprints of the publications are available at <http://www.win.tue.nl/~mpechen/publications/>.

Complete publications list:

Edited Volumes

1. Santos, O.C., Boticario, J.G., Romero, C., Pechenizkiy, M., Merceron, A., Mitros, P., Luna, J.M., Mihaescu, C., Moreno, P., Hershkovitz, A., Ventura, S. & Desmarais, M. (2015) *"Proceedings of the 8th International Conference on Educational Data Mining"*.
2. Pechenizkiy, M. & Gasevic, D. (2015) Special issue on the *"Sparks of the Learning Analytics Future"*, Journal of Learning Analytics 1(3).
3. Pechenizkiy, M. & Wojciechowski, M. (2013) "New Trends in Databases and Information Systems", *Workshop Proceedings of the 16th East European Conference, ADBIS 2012, Poznan, Poland, September 17-21, 2012*, Vol. 185, Springer.
4. Pechenizkiy, M. & Zliobaite, I. (2013) Special Issue on *"Handling Concept Drift in Adaptive Information Systems"*, Evolving Systems, Springer.
5. Rodrigues P., Pechenizkiy M., Gama J., Cruz-Correia R., Liu J., Traina A., Lucas P., Soda P. (2013): *Proceedings of the 26th IEEE International Symposium on Computer-Based Medical Systems*, Porto, Portugal, June 20-22, 2013. IEEE Computer Society.
6. Soda, P., Tortorella, F., Antani, S., Pechenizkiy, M., Cannataro, M. & Tsymbal, A. (2012) *"Proceedings of the 25th IEEE International Symposium on Computer-Based Medical Systems (CBMS 2012)"* IEEE Computer Society.
7. Calders T. & Pechenizkiy M. (2011) Special Issue on *"Educational Data Mining"*, SIGKDD Explorations.
8. Pechenizkiy, M., Calders, T., Conati, C., Ventura, S., Romero, C. & Stamper, J. (Eds.) (2011) *Proceedings of the 4th International Conference on Educational Data Mining*, Eindhoven: Technische Universiteit Eindhoven, 374 pp.

9. Rodrigues, P.P., Pechenizkiy, M., Gaber, M.M. & Gama, J. (Eds.) (2011) *Proceedings of the Learning from Medical Data Streams (LEMEDS'11) workshop @ AIME'2011*.
10. Abel, F., Herder, E., Houben, G.-J., Pechenizkiy, M. & Yudelson, M. (Eds.) (2010) *Proceedings of the International Workshop on Architectures and Building Blocks of Web-Based User-Adaptive Systems* at UMAP 2010.
11. Pechenizkiy, M. & Žliobaite, I. (Eds.) (2010) *Proceedings of the Workshop on "Handling Concept Drift in Adaptive Information Systems: Importance, Challenges and Solutions" (HaCDAIS'2010) @ ECML/PKDD 2010*.
12. Romero, C., Ventura, S., Pechenizkiy, M. & Baker, R. (Eds.) (2010) *Handbook of Educational Data Mining*, Chapman & Hall, CRC Data Mining and Knowledge Discovery Series, CRC Press, Taylor&Francis Group. 513 pp.
13. Soda, P., Pechenizkiy, M., Tortorella, F. & Tsymbal, A. (2010) Special Issue on "Knowledge discovery and computer-based decision support in biomedicine", *Artificial Intelligence in Medicine*, 50(1), Elsevier, pp. 1-2.
14. Pechenizkiy, M. & Tsymbal, A. (2009) Special Issue on "Biomedical Data Mining", *Data & Knowledge Engineering*, 68(12), Elsevier, pp. 1357-1358.
15. Calders, T., Tuyls, K. & Pechenizkiy, M. (Eds.) (2009) *Proceedings of the 21st Benelux Conference on Artificial Intelligence (BNAIC'09)*, Eindhoven: Technische Universiteit Eindhoven, 473 pp.
16. De Bra, P. & Pechenizkiy, M. (Eds.) (2009) *Proceedings of the Workshop on "Dynamic and Adaptive Hypertext: Generic Frameworks, Approaches and Techniques" (DAH'09) @ ACM HT'09*
17. Bridewell, W., Calders, T., Medeiros, A., Kramer, S., Pechenizkiy, M. & Todorovski, L. (Eds.) (2008) *Proceedings of the International Workshop on Induction of Process Models (IPM'08) @ ECML/PKDD 2008*
18. Puuronen, S., Pechenizkiy, M., Tsymbal, A. & Lee, D.-J. (Eds.) (2008) *Proceedings of the 21st IEEE International Symposium on Computer-Based Medical Systems (CBMS'08)*.
19. Beck, J.E., Calders, T., Pechenizkiy, M. & Viola, S.R. (Eds.) (2007) *Proceedings of the Workshop on Educational Data Mining @ ICALT 2007 (EDM@ICALT'07)*.
20. Romero, C., Pechenizkiy, M., Calders, T., Viola, S.R. & Assche, F.V. (Eds.) (2007) *Proceedings of International Workshop on Applying Data Mining in e-Learning (ADML'07) @ ECTEL 2007 Conference*.

Journal Articles

1. Luna, J.M., Pechenizkiy, M. & Ventura, S. (2015) *Mining Exceptional Relationships with Grammar-Guided Genetic Programming*, Knowledge and Information Systems, Springer
2. Gama, J., Žliobaite, I., Bifet, A., Pechenizkiy, M. & Bouchachia, A. (2014) *A Survey on Concept Drift Adaptation*, ACM Computing Surveys, 46(4).
3. Jagadeesh Chandra Bose, R., van der Aalst, W., Zliobaite, I. & Pechenizkiy, M. (2014) *Dealing with concept drifts in process mining*, IEEE Transactions on Neural Networks and Learning Systems, 25(1), pp. 154-171
4. Ang, H., Gopalkrishnan, V., Žliobaite, I., Pechenizkiy, M. & Hoi, S. (2013) *Predictive Handling of Asynchronous Concept Drifts in Distributed Environments*, IEEE Transactions on Knowledge and Data Engineering, 25(10): 2343-2355
5. Zafra, A., Pechenizkiy, M. & Ventura, S. (2013) *HyDR-MI: A Hybrid Algorithm to Reduce Dimensionality in Multiple Instance Learning*, Information Sciences, 222, pp. 282-301.
6. Song, M., Yang, H., Siadat, S. & Pechenizkiy, M. (2013) *A comparative study of dimensionality reduction techniques to enhance trace clustering performances*, Expert Systems with Applications, 40(9), pp. 3722-3737.
7. Knutov, E., De Bra, P. & Pechenizkiy, M. (2011) *Generic Adaptation Framework: a Process-Oriented Perspective*, Journal of Digital Information, 12 (1).
8. Calders, T. & Pechenizkiy, M. (2011) *Introduction to educational data mining*, SIGKDD Explorations, 13(2), pp. 3-6.

9. Zafra, A., Pechenizkiy, M. & Ventura, S. (2012) *ReliefF-MI: An extension of ReliefF to multiple instance learning*, Neurocomputing 75(1), pp. 210-218.
10. Žliobaite, I., Bakker, J. & Pechenizkiy, M. (2011) *Beating the baseline prediction in food sales: How intelligent an intelligent predictor is?* Expert Systems with Applications 39(1), pp. 806-815.
11. Knutov, E., De Bra, P. & Pechenizkiy, M. (2009) *AH 12 Years Later: a Comprehensive Survey of Adaptive Hypermedia Methods and Techniques*, New Review of Hypermedia and Multimedia, 15(1), pp. 5-38.
12. Pechenizkiy, M., Bakker, J., Žliobaite, I., Ivannikov, A. & Kärkkäinen, T. (2009) *Online Mass Flow Prediction in CFB Boilers with Explicit Detection of Sudden Concept Drift*, SIGKDD Explorations, 11(2), pp. 109-116.
13. Tourunen, A., Ivannikov, A., Saastamoinen, J., Kärkkäinen, T., Nevalainen, H. & Pechenizkiy, M. (2009) *Online Method to Characterize Char Loading in Fluidized Bed Combustion*, Journal of Materials Engineering and Technology, 1(2), pp. 191-203.
14. Pechenizkiy, M., Puuronen, S. & Tsymbal, A. (2008) *Towards more Relevance-Oriented Data Mining Research*, Intelligent Data Analysis, 12(2), pp. 237-249.
15. Tsymbal, A., Pechenizkiy, M., Cunningham, P. & Puuronen, S. (2008) *Dynamic Integration of Classifiers for Handling Concept Drift*, Information Fusion, Special Issue on Applications of Ensemble Methods, 9(1), pp. 56-68.
16. Pechenizkiy, M., Tsymbal, A., Puuronen, S. & Patterson, D.W. (2007) *Feature Extraction for Dynamic Integration of Classifiers*, Fundamenta Informaticae, 77(3), pp. 243-275.
17. Vasilyeva, E., Puuronen, S., Pechenizkiy, M. & Rasanen, P. (2007) *Feedback Adaptation in Web-Based Learning Systems*, International Journal of Continuing Engineering Education and Life-Long Learning (IJCEELL), 17(4/5), pp. 337-357.
18. Pechenizkiy, M., Tsymbal, A. & Puuronen, S. (2006) *On Combining Principal Components with Parametric LDA-based Feature Extraction for Supervised Learning*, Foundations of Computing and Decision Sciences, S.I. "Data Mining and Knowledge Discovery", 31(1), pp. 59-73.
19. Pechenizkiy, M., Tsymbal, A. & Puuronen, S. (2006) *Local Dimensionality Reduction and Supervised Learning Within Natural Clusters for Biomedical Data Analysis*, IEEE Transactions on Information Technology in Biomedicine, 10(3), pp. 533-539.
20. Tsymbal, A., Pechenizkiy, M. & Cunningham, P. (2005) *Diversity in Search Strategies for Ensemble Feature Selection*, Information Fusion, 6(1), pp. 83-98.

Conference and Workshop Peer-reviewed Papers

1. Aravanis G., Bucur A., Pechenizkiy M., (2015). "Hippocrates: A Context-aware, Collaboration Enabling Search Tool", In Proceedings of 28th IEEE Conference on Computer-Based Medical Systems (CBMS 2013). Industry track, IEEE Computer Society.
2. Costante, E., Hartog, D. J., Petkovic, M., Etalle, S., & Pechenizkiy, M. (2014). *Hunting the unknown: White-box database leakage detection*. Data and Applications Security and Privacy XXVIII, pp. 243-259, Springer.
3. Luna, J.M., Pechenizkiy, M. & Ventura, S. (2014) *Beyond Association Rule Mining: Exceptional Relationships*, In Proceedings of the International Conference on Data Science and Advanced Analytics (DSAA'2014), ACM/IEEE.
4. Demirtas, E. & Pechenizkiy, M. (2013) *Cross-lingual Polarity Detection with Machine Translation*, In Proceedings of the Workshop on Issues of Sentiment Discovery and Opinion Mining (WISDOM@KDD2013), ACM
5. Kiseleva, J., Lam, H.T., Pechenizkiy, M. & Calders, T. (2013) *Predicting current user intent with contextual Markov models*, In (submitted to) Proceedings of the Domain-Driven Data Mining Workshop @ ICDM'2013, (DDDM'2013), IEEE Computer Society
6. Kiseleva, J., Lam, H.T., Pechenizkiy, M. & Calders, T. (2013) *Discovering temporal hidden contexts in web sessions for user trail prediction*, In Proceedings of the 22nd international conference on World Wide Web, (Companion Volume, TempWeb@WWW'2013), ACM, pp. 1067-1074.

7. Kurniawan, H., Maslov, A. & Pechenizkiy, M. (2013) "*Stress Detection from Speech and Galvanic Skin Response Signals*", In Proceedings of 26th IEEE Conference on Computer-Based Medical Systems (CBMS 2013). IEEE Computer Society.
8. Marrero, A., Mendez, J.A., Maslov, A. & Pechenizkiy, M. (2013) "*ACLAC: An approach for adaptive closed-loop anesthesia control*", In Proceedings of 26th IEEE Conference on Computer-Based Medical Systems (CBMS 2013). IEEE Computer Society.
9. Tromp, E. & Pechenizkiy, M. (2013) *RBEM: A Rule Based Approach to Polarity Detection*, In Proceedings of the Workshop on Issues of Sentiment Discovery and Opinion Mining (WISDOM@KDD2013), ACM.
10. Apeh, E., Žliobaite, I., Pechenizkiy, M. & Gabrys, B. (2012) *Predicting Multi-class Customer Profiles Based on Transactions: a Case Study in Food Sales*, In Proc. of the 32nd Annual Int. Conf. of the British Computer Society's Specialist Group on Artificial Intelligence (SGAI'12), pp. 213-218.
11. Calders, T. & Pechenizkiy, M. (2012) *Cost-sensitive classification problem*, In Workshop on Teaching Machine Learning @ ICML 2012, pp. 1-6.
12. Chambers, L., Tromp, E., Pechenizkiy, M. & Gaber, M. (2012) *Mobile sentiment analysis*, In Proc. of the 16th International Conference on Knowledge-Based and Intelligent Information & Engineering Systems, Frontiers in Artificial Intelligence and Applications 243, IOS Press, pp. 470-479.
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