Jure Žbontar

Curriculum Vitae

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Born	May 28, 1985, in Ljubljana, Slovenia
Citizenship	Slovenian

Education

2008 - present	PhD student Faculty of Computer and Information Science University of Ljubljana Slovenia GPA: 9.909 / 10
2004 - 2008	BSc in Computer Science and Mathematics Faculty of Computer and Information Science University of Ljubljana Slovenia GPA: 9.538 / 10

Professional Positions

2010 - present	Teaching Assistant, Bioinformatics Laboratory Faculty of Computer and Information Science University of Ljubljana
2008 - 2010	Teaching Assistant, Artificial Intelligence Laboratory Faculty of Computer and Information Science University of Ljubljana
2007 - 2008	Information Systems Laboratory Faculty of Computer and Information Science University of Ljubljana

Research Visits

Jan - Aug 2014 — The Courant Institute of Mathematical Sciences
New York University
New York, NY 10003, USA
Mentor: Yann LeCun (yann@cs.nyu.edu)

Consulting

2013 — CTB/McGraw-Hill
Implement system for automatic short answer scoring
`https://bitbucket.org/jzbontar/asap`
Contact: Michelle Barrett (michelle_barrett@ctb.com)

Teaching Activities

Summer Schools

The Faculty of Computer and Information Science in Ljubljana organizes summer schools each year. I was the main organizer of the Machine Learning Summer School in 2012 and 2013. The summer school is a gentle introduction for undergraduate students focusing on the practical aspects of applying machine learning to solve real world problems.

Teaching Assistant

I teach 10 hours of lectures per week where I'm in charge of setting up the exercises and homework assignments.

2010 - 2012	Programming I
2009	Algorithms and Data Structures
2009	Artificial Intelligence

Awards

2013 — Best Teaching Assistant Award (based on student voting)
Faculty of Computer and Information Science
University of Ljubljana

Programming Competitions

During my undergraduate years I enjoyed solving algorithmic problems. I entered as many programming competitions as I possibly could. The lessons

learned had a great impact on my programming style and my way of thinking and solving problems.

2009	Open Krakow Team Programming Challenge
2008 - 2010	Entered Many TopCoder Competitions
2008	ACM Central European Regional Contest
2006 - 2008	ACM Slovenian Regional Contest
2006 - 2010	Spent a lot of time on `http://uva.onlinejudge.org/` online judge

Machine Learning Competitions

Machine learning competitions probably take up most of my free time. They are perfect for testing new ideas and comparing them to established methods. I have learned many valuable lessons about how to make learning algorithm behave well on real datasets. It's really exciting to see the machine learning approach beat human benchmarks and hand engineering.

2013	5th / 249	The Marinexplore and Cornell University Whale Detection Challenge[1], `http://www.kaggle.com/c/whale-detection-challenge`
2012	1st / 126	Topical Classification of Biomedical Research Papers, JRS 2012 Data Mining Competition[2], `http://tunedit.org/challenge/JRS12Contest`
2012	2nd / 91	EMC Israel Data Science Challenge[2], `http://www.kaggle.com/c/emc-data-science`
2012	2nd / 156	The Hewlett Foundation: Short Answer Scoring Competition[1], `http://www.kaggle.com/c/asap-sas`
2011	1st / 104	Algorithm for Optimal Job Sceduling and Task Allocation under Constraints[1] `http://tunedit.org/challenge/job-scheduling`
2010	1st / 22	Forecast Eurovision Voting[1], `http://www.kaggle.com/c/Eurovision2010`

[1]Entered competition alone.
[2]Team leader.

Completed Online Courses

When I am not competing on Kaggle I am probably completing some online course. The quality of some of the courses is absolutely amazing. The proliferation of online courses has definitely played a role in my education. In the past few years I have completed the following online courses:

Coursera	• Machine Learning (Andrew Ng)
	• Neural Networks for Machine Learning (Geoffrey Hinton)
	• Probabilistic Graphical Models (Daphne Koller)
	• Writing in the Sciences (Kristin Sainani)
Udacity	• Introduction to Parallel Programming (John Owens, David Luebke)
	• Introduction to Artificial Intelligence (Sebastian Thrun, Peter Norvig)
Stanford	• EE263: Introduction to Linear Dynamical Systems (Stephen Boyd)
	• CS229: Machine Learning (Andrew Ng)
	• CS294A: Deep Learning and Unsupervised Feature Learning (Andrew Ng)
Caltech	• Learning From Data (Yaser Abu-Mostafa)

Programming Skills

I really like programming. During my career I tried many different programming languages from C, C++, Java and Go to LISP, Haskell, OCaml, Erlang and Prolog. I also tried web programming with JavaScript, PHP and ActionScript. Today, most of my code is written in Python (with NumPy, Theano and scikit-learn) and Lua (with Torch). If my code is not running fast enough, I like to speed it up with Cython, CUDA or C.

Publications

[1] Janez Demšar, Tomaž Curk, Aleš Erjavec, Črt Gorup, Tomaž Hočevar, Mitar Milutinovič, Martin Možina, Matija Polajnar, Marko Toplak, Anže

Starič, Jure Žbontar, et al. Orange: data mining toolbox in python. *The Journal of Machine Learning Research*, 14(1):2349–2353, 2013.

[2] Jure Žbontar and Yann LeCun. Computing the stereo matching cost with a convolutional neural network. *arXiv preprint arXiv:1409.4326*, 2014.

[3] Jure Žbontar, Marinka Zitnik, Miha Zidar, Gregor Majcen, Matic Potocnik, and Blaz Zupan. Team uljubljanas solution to the jrs 2012 data mining competition. In *Rough Sets and Current Trends in Computing*, pages 471–478. Springer, 2012.