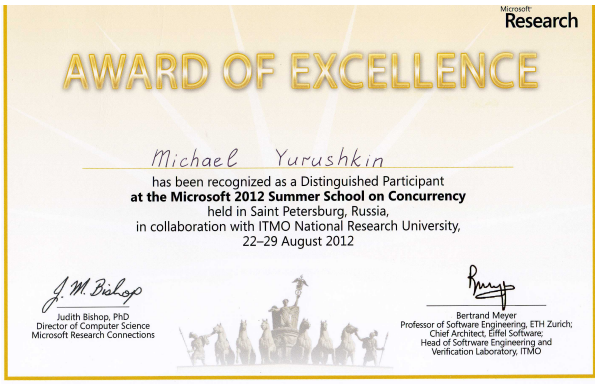
Me with Jack Dongarra (founder of Linpack)



Microsoft research: Award of excellence

"Always look on the bright side of life" Monty Pythons Flying Circus

Mikhail Yurushkin, PhD
Rostov on Don (UTC +3), Russia

Lecturing and teaching: senior lecturer at SFEDU
Current position: self-employed, consulting in development of Artificial Intelligent (AI) systems and software development
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Lecturing and Teaching

2018 - current: Senior lecturer at SFEDU. My course is about Deep Learning and it's application in Computer Vision (CV) and Natural Language Processing (NLP).
2018: Technical reviewer of **Deep Reinforcement Learning Hands-On book**. ISBN 139781788834247 546 pages, source

Education

Southern Federal University, Rostov-on-Don, Russia. Institute of mathematics, mechanics and computer science. Department of algebra and discrete mathematics.

- Candidate of Physico-Mathematical Sciences. 2016.
- YSDA (The Yandex School of Data Analysis). 2015-2017.
- Master of Science in HPC and parallel computing. 2010-2012.
- Bachelor of Science. 2006-2010. **Red diploma**.

Data analyzes skills

- Deep Learning frameworks: Keras/Tensorflow, Theano/Lasagne, Pytorch.
- Languages: Python, Go, C++.
- Methods: Deep Learning and it's applications in Computer Vision (CV), Natural Language Processing (NLP), Reinforcement learning (RL); gradient boosting/random forest/svm/linear regression/ridge regression/etc.

- Other frameworks and packages: numpy/pandas/matplotlib, RapidMiner/Weka.

Commercial projects in which I successfully used deep learning and machine learning:

- **opening.io**. Application of Deep Learning in NLP.
- High frequency trading for russian exchange.
- Prediction of city energy consumption. I used matlab/fuzzy neuro network to solve this problem.
- Products classification by categories. I automatically classified big number of products by categories for **offerbox.ru**. Prototype is implemented in python. High performance algorithm is implemented in pure C++/boost.
- Optimization of weka random forest in C++.

High Performance computing, program optimization and compilers development

My workspace: gcc/icc/vtune/qtcreator/linux.

I have experience in the following areas:

- low level optimization: avx vectorization, pipelining, data prefetching, loop unrolling, data cache, virtual memory/tlb cache.
- parallel computing (openmp/pthreads, mpi, hadoop/apache spark/hdfs/hbase/kafka/storm).

I've been working since 2008 year in the group of programmers and scientists. We develop multi-front-end optimizing compiler - Optimizing Parallel System (OPS).

My projects:

- FORTRAN 77/90 front-end implementation in OPS project. I used C++/Antrl/Rose compiler.
- Front-end for stack oriented language implementation (my Intel internship project).
- Middle-end: block data placement automatization support in C compiler. I implemented directives which help programmers to use block data placement in real programs.
- High performance matrix multiplication algorithm (DGEMM) with double blocking in shared memory. My implementation of this algorithm has better performance than Intel MKL, PLASMA, OpenBLAS.

Native development skills

I have solid (7+ years) experience of non-stop cross-platform native C++ development for windows/linux/freebsd.

- Main languages: C++, python, NSIS.
- Compilers: gcc/icc/clang.
- Frameworks: boost/qt/qml/gstreamer/curl/zlib/libtorrent/htmlayout.
- other: redmine/trac, git/svn, doxygen.

Employment history

- Consulting in AI and software development (05.01.2017-current).
- Data Scientist at opening.io (01.01.2017-current).
- C++/python programmer at softsalad (09.01.10-03.01.2017).
- Intel corporation. Intern (07.06.10-08.26.10). Completed the internship in frames of Intel Summer School 2010 which resulted in successful Development of front-end compiler for stack-oriented language project implementation as well as participation in the educational program.
- Zaurmann Software company. Linux programmer (10.01.09 - 2.01.10)

Awards

- Candidate Master
- Microsoft research: Award of excellence. Michael Yurushkin has been recognized as a Ditinguished Paricipant at the Microsoft 2012 Summer School on Concurrency held in Saint Petersburg, Russia, incollaboration with ITMO National Research Univirsity, 22-29 August 2012.
- Completed the internship in frames of Intel Summer School 2010 which resulted in successful Development of front-end compiler for stack-oriented language project implementation as well as participation in the educational program. **Intel corp**.
- B.S. diploma with distinction, SFEDU.
- Prize-winning places in programming contests .