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GENERAL JOB EXPERIENCE

June 2018 – September 2018 — Research Internship at Scotiabank Group Treasury in Toronto (Ontario, Canada). Supervisors: Michael Friedman, Karl Wouterloot. Contacts: Akram Khaleghi, Gregory Boivin. The project was about customer analytics, customer lifelong value, and improvements for funds transfer pricing. Technology stack: Hadoop, PySpark, Hive. The most frequently used libraries: tslearn, tsfresh, dtaidistance, sklearn.

July 2016 – December 2017 — Software Engineer at Yandex (Russian Search Engine Company) in Minsk and Moscow. Project: speech recognition core engine (Yandex Speechkit). Job was related to training deep recurrent neural models. Supervisor: Aliaksei Kolesau. Contacts: Ilya Edrenkin, Georgy Bronnikov, Alexander Daryin, Yury Kartynnik, Muammar Al-Sheddivat. Programming Languages: C++, Python. The most frequently used libraries: tensorflow, kaldi, torch.

July 2013 – September 2013 — Software Developer Intern at Yandex (Russian Search Engine Company) in Moscow. Was developing Recommender Systems for the service Yandex.Music. Implemented latent factor models with implicit alternating least squares optimization. Supervisor: Michael Roizner. Contacts: Peter Romov, Darya Arbuzova. Programming Languages: C++ (majority of time) and Python. The most frequently used libraries: Eigen, STL.

SELF-EMPLOYMENT JOB EXPERIENCE

August 2015 – June 2020 — Independent Software Engineer. Distance work as individual entrepreneur from Belarus with legal contract. Sometimes full-time, sometimes part-time, sometimes idle. Worked with projects about E-commerce Models, Recommender Systems, Revenue Management and Pricing, Marketplace Analytics. Contacts: Mikhail Nediak, Yuri Levin.

EDUCATION

2020–now — PhD Candidate at Smith School of Business (Kingston, Ontario, Canada). The track is called "Revenue Management and Pricing Optimization". Scientific Supervisor: Mikhail Nediak.

2017–2019 — Master Student at National Research University Higher School of Economics (Moscow, Russia), speciality Statistical Learning Theory, joint program with Skoltech. Scientific Supervisor: Alexander Gasnikov.

2017–2019 — Master Student at Skolkovo Institute of Science and Technology (Moscow, Russia), speciality Data Science, joint program with NRU HSE. Scientific Supervisor: Alexander Gasnikov.

2011–2017 — Student at Belarusian State University on speciality Computer Science. On 4th Semester finished educational course from company Exadel about Web Development and Java. Scientific Supervisor: Vladimir Kotov, kotovvm@bsu.by.

2012–2014 — Yandex School of Data Analysis. It is a master's-level independent program in Computer Science and Data Analysis provided by Yandex search engine company. Minsk branch supervisor: Aliaksei Tolstikov. Link to the students list and marks for courses (in Russian) is [here](#).

2007–2011 — 41st Minsk Mathematical School. Finished with a gold medal.

PROJECTS

1. Revenue Management System prototype for a private golf hotel resort. Approach based on the randomized linear programming for estimating bid prices was successfully applied with approximately 5% revenue increase. The source code is in a private repository, but I can show the non-NDA-protected components during personal communication. Team: Maksim Sporyshev, John Gao, Stephane Gosselin, Gabrielle Mehlretter, Mikhail Nediak, Yuri Levin.
Repository: https://github.com/nekrald/hotel_rm

2. Sea Freight Revenue Management System prototype. The project is scalable, accounts for uncertainty, makes profit from empty container transportation, and covers more business lines together than the previous implementations. Lagrangian-Relaxation based framework was extended for mixed event types and two types of constraints of different structure. The source code is in a private repository, but I can show the code during personal communication. Team: Maksim Sporyshev, Henadzi Klimuk, Aliaksandra Zhykhareva, Mikhail Kovalyov, Genrikh Levin, Alexander Gasnikov, Mikhail Nediak, Yuri Levin.
Repository: https://github.com/nekrald/sea_freight

PROFESSIONAL SKILLS

- Main Programming Languages: C++, Python.
- Other Programming Languages: R, Java, Bash.
- Version Control Systems: git, svn, mercurial.
- Frameworks: pytorch, tensorflow, sklearn, pyspark, numpy, scipy, matplotlib, django, pandas, gurobipy.
- Speaking Languages: Belarusian (native), Russian (native), English (professional), French (beginner), Polish (beginner).

CONTESTS & OLYMPIADS

1. Programming contests.

- ACM-ICPC World Finals 2014 (Ekaterinburg, Russia) - 14th place. Team Members: Yauheni Gritskevich, Aliaksei Kolesau. Team Coach: Vladimir Kotov. ([WF 2014 standings link](#))
- ACM-ICPC World Finals 2015 (Marrakech, Morocco) - 21st place. Team Members: Yauheni Gritskevich, Aliaksei Kolesau. Team Coach: Vladimir Kotov. ([WF 2015 standings link](#))
- ESICUP Challenge 2015. It is an international project contest about the best packing for a real-life logistic problem from the well-known car manufacturer RENAULT. Team passed qualification with 4th place. Final results: Instances A – 5th place, Instances B – 6th place, Instances X - 5th place. Team Members: Pavel Irzhauski, Aliaksei Kolesau, Henadzi Klimuk. Supervisor: Vladimir Kotov. More information is given on the page <http://challenge-esicup-2015.org/>.
- ACM-ICPC Northeastern European Regional Contest (NEERC) - 24th place in 2012, 23rd place in 2013, 14th place in 2014. Team Members: Yauheni Gritskevich, Aliaksei Kolesau. Team Coach: Vladimir Kotov. Links: [NEERC standings 2014](#), [NEERC standings 2013](#), [NEERC standings 2012](#).
- Google HashCode 2017 (Paris, France), in team abacabadabacaba. Were 13th at elimination, 30th at the Finals. Google Hashcode 2018 (Dublin, Ireland), in team abacabadabacaba. Were 35th at elimination, 34th at the Finals. Team Members: Yauheni Gritskevich, Aliaksei Kolesau.

2. Mathematical olympiads.

- International Mathematical Competition for University Students, IMC 2015, Blagoevgrad, Bulgaria, 2nd Diploma (Silver Medal). Team Members: Sergey Bondarev, Viachaslau Baradachou. Link to the [results](#). Supervisor: Yauheni Radyna.
- International Mathematical Competition for University Students, IMC 2014, Blagoevgrad, Bulgaria, 3rd Diploma (Bronze Medal). Team Members: Aliaksandr Kazlou. Link to the [results](#). Supervisor: Aleh Yablonski.
- International Tournament of Young Mathematicians – 3rd diploma (ITYM 2010, Orsay, France), 1st place (ITYM 2011, Minsk, Belarus), team supervisor (ITYM 2012, Orsay, France). Here one can find information about [ITYM](#). Team Members: Vitaly Zayankovski, Yauhen Babakhin, Yauhen Zdanovich, Ilia Fridman, Vitaliy Korbut, Anna Zhdan, Viachaslau Murashka. Supervisors: Barys Zadornyy, Alexander Minets, Tsimafei Khatkevich.
- Belarusian IMO Selection 2011, 8th place. Belarusian National Olympiad 2011, 2nd diploma. Contacts: Alexey Mazanik, Igor Voronovich.

PARTICIPATION IN SCIENCE & EDUCATION ACTIVITIES

- Received Mitacs Research Travel Grant for the project "Customer Lifelong Value: Prediction Engine" (2018, Toronto, Ontario, Canada). Scientific Supervisor: Mikhail Nediak.
- Summer Mathematical Schools (participation requires international selection) : MOMISS 2013 (Germany, Bremen), DOUBNA 2011 (Russia, Doubna).
- 5th Festival of Sciences – "Scientists of the future" projects competition, Moscow 2010, 4th diploma with project "Bunches and reconstruction" in Mathematical Computer Science section. Team: Mikhail Khursevich, Aliaksei Ivanin. Coordinator: Barys Zadornyy.
- Participant at European Union Contest for Young Scientists (EUCYS 2010, Lisbon, Portugal) with project "A points' reconstruction problem". Team: Mikhail Khursevich, Aliaksei Ivanin. Coordinator: Vitaly Zhylko.
- Baltic Scientific-Engineering Fair (BaltSEF 2011, St.Petersburg), 2nd diploma and special prize with project "Combinatorial analogue of a tomography problem". Team: Mikhail Khursevich, Aliaksei Ivanin. Coordinator: Barys Zadornyy.
- Participant at Intel International Scientific-Engineering Fair (Intel ISEF 2011, Los Angeles, USA) with project "Combinatorial analogue of a tomography problem". Team: Mikhail Khursevich, Dmitry Kabak.

PUBLICATIONS

- Aliaksandr Nekrashevich. – Stochastic Modelling and Optimization in Freight Revenue Management. Master Thesis, NRU HSE/Skoltech, 2019. <https://www.hse.ru/en/edu/vkr/296307521>.
- Alexandre Dolgui, Vladimir Kotov, Aliaksandr Nekrashevich, Alain Quilliot – General parametric scheme for the online uniform scheduling problem with two different speeds. Information Processing Letters, Elsevier, 2018, 134, pp.18 - 23.
<https://hal.archives-ouvertes.fr/hal-01709442>
<https://www.sciencedirect.com/science/article/pii/S0020019018300188>
- Aliaksei Kolesau, Pavel Irzhauski, Aliaksandr Nekrashevich, Henadzi Klimuk, Vladimir Kotov – Genetic approach to ESICUP Renault Container Loading Challenge 2015. 12th ESICUP Meeting Booklet, 2015, pp. 24–25.

TEACHING EXPERIENCE

Oct 2020 – Dec 2020 — Teaching Assistant for MMA-830 (Pricing Analytics) at Smith School of Business. Supervisors: Yuri Levin (yuri.levin@queensu.ca) and Michael Friedman (mkf4@queensu.ca).

Jul 2020 – Sep 2020 — Technical Advisor for MMAI-847 (Capstone Projects) at Smith School of Business. Supervisor: Mikhail Nediak (mikhail.nediak@queensu.ca).

Apr 2020 – Jun 2020 — Teaching Assistant for MMA-867 (Predictive Analytics) at Smith School of Business. Supervisor: Anton Ovchinnikov (anton.ovchinnikov@queensu.ca).

Feb 2017 – May 2017 — Teaching Assistant at Yandex School of Data Analysis. Machine Learning seminars in the Minsk branch. Supervisor: Aliaksei Tolstikau.

Nov 2016 – Dec 2016 — Teaching Machine Learning for Life Telecommunication Systems. Life is the 3rd largest mobile operator in Belarus. Supervisor: Yauheni Unuchak.

Sep 2011 – Jan 2012 — Trainings at 41st Minsk Gymnasium for Mathematical olympiads. Supervisor: Leonid Lavrinovich.