Vyacheslav Napadovsky

SOFTWARE DEVELOPER AND RESEARCHER

Moscow, Russia

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Summary

- Proficient with C/C++ (including C++17, OpenMP, CUDA) and C# (including C++ CLR).
- Experienced in program optimization, multithreading and Assembler.
- Passionate about new technologies and always seeking to expand knowledge. Currently I learn Machine Learning.
- Experienced in 3D Video Processing, Motion Estimation, Depth Estimation.
- I enjoy establishing automated tests and continuous integration pipelines that helps to deliver features fast and with confidence.

Skills

Programming Languages	C/C++, C#, Assembler, Delphi, Java, Scripting languages (Python, Lua), SQL
Operating Systems	Windows (WinAPI, GDI, Windows COM, DCOM, DirectShow),
	Debian/Ubuntu (APT package mgmt.), MacOS (XCode with CMake builds setup)
Database systems	ProstgreSQL, Firebird
Libraries	Qt 4.x, ATL, .NET (Core 2.0 and Standard 4.5), AviSynth 2.5, OpenGL 4.1; OpenMP, CUDA
IDE and others	Microsoft Visual Studio, Qt Creator; Windows Debugger; CMake, NSIS; Git, SVN; Docker, Travis; SignalR
Languages	English (advanced), Russian (native), Japanese (basic)

Education & Certification

Lomonosov Moscow State University
Moscow, Russia

MASTER OF SCIENCE (SPECIALIST) IN APPLIED MATHEMATICS AND COMPUTER SCIENCE
Sep. 2009 – Jun. 2014

- Napadovsky V. 2014. Locally Adaptive Algorithm For Detection And Elimination of Color Inconsistencies Between Views of Stereoscopic Video, M.S. Thesis, Lomonosov Moscow State University

Massively Parallel Process Programming (CUDA) Certification

NVIDIA
Jan. 2013

Certificate ID 056-2013

Work Experience

Sentry Management Solutions

SENIOR SOFTWARE ARCHTECT
Mar 2019 – Present

- Design and implement DR plan; API integration for live services; monitoring implementation; CI pipelines for legacy software; Docker, Gitlab CI, MySQL, PHP, C#; AWS EC2, AWS ECS, AWS ECR, AWS CodeBuild.
- Vehicles routing, location based services, high load, API integration, C#, parallel computing, web queries & caching; OSM, OSRM, Mapbox; Continuous Integration, Selenium tests and PHP Psalm analysis automation; heavy use of SQL.

Independent contractor · Taxi Plus LLC

FULL-STACK DEVELOPER
May 2018 – Oct. 2018

- .NET Core MVC based website to collect data from GPS car trackers and visualize speed limits violations.
- Deployment is set up with Docker. Frontend – Bootstrap 3, jQuery, SignalR.

Yandex N.V.
Moscow, Russia

SOFTWARE DEVELOPER
Mar. 2017 – Feb. 2018

- Deployed automated pipeline to show voiceover studio labels for video searches based on internal tensorflow audio patterns' matching algorithm results.
- Enhanced video search results relevance with series data propagation over content duplicates.
- Used technologies: C++, Python, Yandex YT (Hadoop-like system to work with big data), SQL, Containers that are similar to Docker.

Independent contractor · Freelance
Remote

SOFTWARE DEVELOPER
Jun. 2015 – Oct. 2016

- Developed an exchange framework connecting three trading systems (QUIK – including QUIK FIX, Metatrader and MOEX ASTS) into one unified interface using C++, Google Protocol Buffers, Qt and Lua.

Self-employed

WINDOWS PHONE APPLICATIONS DEVELOPMENT
Mar. 2015 – Jun. 2015

- "Location by Number" app (link) to detect country and region for any phone number. Score in the market is 4.2 (based on 875 reviews).
- "Tickets" app link to browse schedule of Russian Railways. Score in the market is 3.9 (based on 212 reviews).
- Both apps have got over 90k downloads.

Wizarlabs, Inc.
Moscow, Russia

SENIOR SOFTWARE DEVELOPER
May. 2014 – Mar. 2015

- Designed Lua scripting engine connection with C++ custom game rendering engine.
- Enhanced Lua based UI in MovieToons (Link) iOS app.
- Developed tools with Qt to tune parameters of 3D models and for game translation capabilities.
- Enhanced reliability of Lua state save and load (game scene save&load) with Google Protocol Buffers.

MSU Graphics and Media Laboratory
Moscow, Russia

RESEARCHER, SOFTWARE DEVELOPER
Jun. 2011 – May. 2014

- Invented color correction method to eliminate discrepancies between views in 3D video (Link to Demo).
- Improved Motion Estimation algorithm tolerance for local color discrepancies.
- Launched the automated 3D video quality measurement project (VQMT3D, link). Performed initial project QA. Merged and maintained code of group of researches into VQMT3D. Added color and geometry distortion metrics.
- Managed a team of researchers to prepare quality reports for 3D movies presented on International 3D-stereo Film Festival in Moscow (link) in 2013 and 2014.
- Scaled the tool to measure quality of over 100 full-feature 3D movies available on Blu-ray 3D media in 2014.
- Published open-source ssifSource library to read YUV frames for both views of Blu-ray 3D media (link).

Texet
Remote

PART-TIME SOFTWARE DEVELOPER
Jun. 2009 – Sep. 2010

- Translated binary Chinese tools to Russian with OllyDbg and Assembler i386.
- Wrote a GUI over MEncoder and FFMpeg video converters for portable media players (link).

Projects

Sweetie Bot Project (open-source, volunteering)

SOFTWARE DEVELOPER · CONTINUOUS INTEGRATION
Oct. 2017 – Present

- Configured automated deb packages builds and APT repository publishing via Gitlab CI in order to build ROS dependencies and main project packages for different platforms (link).

Publications

- **Vatolin D., Bokov A., Erofeev M., Napadovsky V.** 2016.
  Trends in S3D movies quality as evaluated on 105 movies and 10 quality metrics,
  Proceedings of Stereoscopic Displays and Applications XXVII.
  Link: http://dx.doi.org/10.2352/ISSN.2470-1173.2016.5.SDA-439
- **Voronov A., Vatolin D., Sumin D., Napadovsky V., Borisov A.** 2013.
  Methodology of Stereoscopic Motion Picture Quality Assessment,
  Stereoscopic Displays and Applications XXIV, Proc. of SPIE-IS&T Electronic Imaging.
  Link: http://proceedings.spiedigitallibrary.org/proceeding.aspx?articleid=1666847
- **Voronov A., Vatolin D., Napadovsky V., Sumin D., Borisov A.** 2012.
  Towards Automatic Stereo-video Quality Assessment and Detection of Color and Sharpness Mismatch,
  International Conference on 3D Imaging (IC3D).
  Link: http://ieeexplore.ieee.org/xpl/articleDetails.jsp?arnumber=6615121

- **Ватолин Д. С., Воронов А. А., Нападовский В. В., Борисов А. В.** Исследование артефактов в стереокино и примеры анализа кинокартин // Международная ежегодная научно-техническая конференция «Запись и воспроизведение объемных изображений в кинематографе и других областях» — Москва, 2012. — стр. 190–203. ISBN 978-5-904275-05-1
- **Ватолин Д. С., Воронов А. А., Нападовский В. В., Борисов А. В.** Исследование артефактов в стереокино и примеры анализа кинокартин // журнал «Мир Техники Кино», №26 [ВАК] — Издательство: ООО "ИПП "КУНА", Москва, 2012. — стр.28-35. ISSN: 1991-3400
- **Нападовский В. В.** Локально-адаптивный алгоритм цветокоррекции стереопары // XIX Международная конференция студентов, аспирантов и молодых ученых «Ломоносов – 2012» — 2012. — стр. 32-33. ISBN 978-5-89407-477-1
- **Нападовский В. В., Сумин Д. А., Ватолин Д. С., Воронов А. А.** Методика оценки стереоскопических артефактов на примере анализа 16 фильмов // Международная ежегодная научно-техническая конференция «Запись и воспроизведение объемных изображений в кинематографе и других областях» — Москва, 2013. — стр. 212–222. ISBN 978-5-904275-06-8
- **Нападовский В. В.** Алгоритм автоматического обнаружения цветовых расхождений в стереовидео // XXI Международная конференция студентов, аспирантов и молодых ученых «Ломоносов – 2014» — Москва, 2014. — стр. 13-15.

References

- **Sergey Polyashov**, Head of Video Search Quality group
  Yandex N.V.
- **Antony Polukhin**, Senior Developer at Video Search Quality group
  Yandex LLC

- **Mike Kushnikov**, CEO
  WizarLab, Inc.
- **Dmitry Vatolin**, Head of Video Group
  Moscow State University
- **Alexander Voronov**, Teamleader
  Graphics and Media Laboratory at MSU