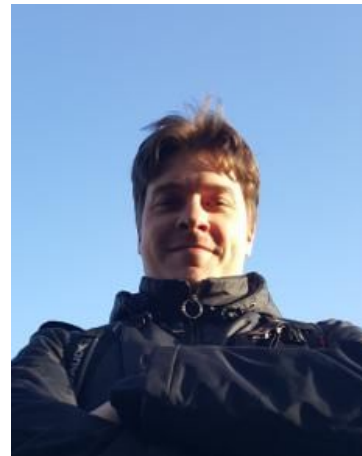


Vasili Korol

Full stack web developer (Python / Javascript)
Odense, Denmark



Personal data

Age: 34
Married, have son (9 y.o.)

Contact information

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Personal Statement

Strong IT skills (15+ years of versatile experience)
Work effectively both as team member and independently
Enthusiastic and committed
Experienced in IT-related problem-solving
Spoken languages: Russian (native), English (fluent), Danish (passed Prøve i Dansk 3 exam)

Education

- 2002–2008: Master's degree (with distinction) in theoretical physics.
Undergraduate, graduate and post-graduate student at Saint Petersburg State Polytechnical University, Faculty of Physics and Technology, department of Cosmic Physics. The thesis "Search for possible space-time variations of the fine-structure constant and isotopic shifts" (a supervisor Prof. M.G.Kozlov).
- 2000–2002: Lyceum "Physical-Technical School", Saint Petersburg.
- 1992–2000: English Gymnasium №105, Saint Petersburg.
- 1993: Rosetta Primary School, Belfast, UK.

Professional Career

- 2015 – present: Software developer in the [QuantBioLab research group](#) at the University of Southern Denmark, dept. of Physics, Chemistry and Pharmacy (HPC section).
I am the principal developer of [VIKING](#), a web application that provides convenient user interface for running various scientific simulations. It is developed in Python3 / Django, Javascript / WebGL and also includes some C code.
- 2014 – 2015: Lead programmer (Perl) at Internet Projects LLC, russian informational portals [subscribe.ru](#) and [sendsay.ru](#).
Worked in a team of developers on the projects targeted at developing a custom-framework API for news aggregation and content processing services. This involved integration with social networks and blogs (FB, Twitter, Vkontakte, LiveJournal), web scraping and designing instruments for user publications at the portal and beyond.
- 2010 – 2014: Head of the IT department at [Computerprof LLC](#).
Arranged the work of ca 10 engineers to support clients' computer and network infrastructure. Personally handled «tough» cases where others failed. Established the assembly and sales of company desktop PCs and servers model range.

2007 – 2010: Systems integration engineer, «[Ascod NT](#)» LLC.

My duties included solving a wide spectre of IT-related tasks, from assembling computer hardware (desktop and servers) to medical software integration.

2004 – 2008: Assistant at the Department of Neutron Research at Saint Petersburg Institute of Nuclear physics.

During my scientific career in theoretical physics, I worked in Professor [M.G.Kozlov's](#) scientific group developing a method for a search of possible variations of the fundamental fine-structure constant α . I used Fortran for expanding the available computational suite and Perl for analyzing and aggregating the results of calculations. During these years, being a University student, I co-authored the following two papers in a peer-reviewed journal Physical Review A:

- V.A. Korol and M.G. Kozlov, "[Relativistic corrections to the isotope shift in light ions](#)", Phys.Rev.A **76**, 022103 (2007)
- M.G.Kozlov, V.A.Korol, J.C.Berengut, V.A.Dzuba, and V.V.Flambaum, "[Space-time variation of the fine-structure constant and evolution of isotope abundances](#)", Phys.Rev.A **70**, 062108 (2004)

2003 – 2014: Systems administrator at the Institute of Experimental Medicine of the Russian Academy of Medicine Sciences.

I maintained the scientific library network, the Institute's server (Linux, Apache, Squid), file storage (Synology DS) and a number of Windows client PCs.

Professional Experience and Skills

Programming languages:

- Python

I use Python3 (and previously 2.7) in a wide range of appliances. I use Django framework for backend developing in web applications. Experienced with writing and debugging asynchronous code (threading, Celery). Familiar with Numpy.

- Javascript

Several years of experience with modern JS (ECMA6+, toolchain NPM + Webpack + Babel + UglifyJS / Clojure compiler), including development of WebGL 3D-graphics applications using THREE.js and in-browser virtual reality using WebVR / WebXR. I am skilled in optimizing JS code for performance. Have some experience with ASM.js and WebAssembly (Emscripten).

- Perl

Perl user since early 2000s. Experienced in high-load web projects (<http://subscribe.ru>, <http://sendsay.ru>); use perl in everyday tasks — server scripts, log analyzing, text parsing etc.

- C/C++

Familiar with most features of C++11/14 features. I participated in the development of the [MBN Explorer](#) multiscale simulations software, written in C++.

- Ruby

I maintain a [Ruby gem](#) for constructing SQL queries using object-oriented approach.

- PHP

Have experience in programming complex features for internet shops. Familiar with Joomla!, Wordpress and Drupal CMS/frameworks.

- Other languages

I use bash for routine console scripting. Used Fortran 77/90 in the 2000s during my scientific career and studied Pascal in the late 1990s.

Web development

I am experienced in developing both the backend and the frontend. Have strong skills in HTML5 and CSS3, cross-browser solutions, REST interfaces, MVC, WebSockets.

Supercomputers

Familiar with the SLURM and PBS queue managers and have some experience with the Globus data management platform.

Used tools / software / OS:

- I use Linux as primary desktop and server OS, but also am an advanced Windows user.
- Active user of Git and Subversion.
- Used mostly Redmine for bugtracking. Active [GitHub user](#), previously used BitBucket.
- Web application sandboxing using LXC containers.
- Prefer Doxygen style for documenting my code.
- Used LaTeX in my publications during the scientific career.

Experience with database maintaining:

I am experienced in high-load SQL database designing and optimizing. I maintained MySQL, PostgreSQL and IBM Informix systems of several levels of complexity – from small dbs (few tables, 1000+ rows) to databases utilized by an Internet portal (<http://subscribe.ru>). As an example of a «challenge task», I have successfully converted a 80+ GB Transbase database with tables containing up to over 100 million rows of mixed type data (text/binary) to MySQL.

I am familiar with transactional query mechanisms and replication techniques.

System and Network Administration

- Experienced Linux administrator (over 15 years of practice — active since 2003). Have worked with various Linux distributions, both desktop and servers. Encountered and solved a very large number of different scale problems related to web servers, mail servers, networking, security, file storage, authentication, virtualization etc. Managed FreeIPA domains and implemented Linux-based storage solutions.
- Skilled in Web server administration (LXC containers, Nginx, uWSGI, FastCGI, Phusion Passenger; Apache with mod_perl, mod_php).
- Great experience in administering Windows OS family - from Windows 9X and up to Windows 10 (desktop versions) and from NT to Server 2012 (server versions). Good knowledge of Active Directory (successfully created and maintained dozens of AD domains; built systems with multiple DCs; solved global AD-related problems).
- Have limited experience in configuring Cisco network devices (site-to-site VPN, traffic shaping, load balancing). CCNA certificate expired in 2014.
- Great experience in overall networking: designed, installed and configured networks of various complexity (ad-hoc, distributed and enterprise). Very good knowledge of network protocols and technologies (ip-addressing, ethernet switching, routing, VLAN and vice versa).