

Dmitry Dvoynikov

Software developer
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I am a programmer, and I love my job. I have 25 years of experience programming for money and a few years before that programming for fun, started in 1988 at age 12.

I am a rigorous analytical pragmatist, caring for the project, striving for quality, well-defined architecture, clean code and following the established rules in general.

Over the years I have worked on a lot of interesting projects, building around databases, network services, distributed, security and cryptography in the financial/payments area.

Although my positions were invariably some kind of “software developer”, I always had to architect at least in some part. Starting in the 90s, having built products from the ground up, this is what I like – building things, finding solutions, making it all work.

My best languages would be Python, Java and C++, SQL for relational databases (PostgreSQL, MSSQL) plus MongoDB, I work in Windows, administer Linux and FreeBSD, but the full list of languages, products and technologies that I had to work with would be too long, I only mention some of them in small print alongside the jobs below.

Accomplishments, I hope to believe that I have helped to build many good products, some award winning even, but undoubtedly the credit is due to the many great people I was lucky to have worked with.

I used to author and read courses in C++, PostgreSQL and information security to developers.

I run a few open source projects, such as [Python 3 application framework](#), [VPN daemon in C](#), [e-mail processing server in C++](#), [TCP-in-HTTP tunnel in Delphi](#) or FPGA-related stuff in VHDL.

I also enjoy writing tech articles and political blogs.

Job unrelated, my wife and I, we live in Berlin, are vegetarians and in our spare time enjoy yoga, jazz, walking in the woods, riding bicycles and driving on Autobahns.

Experience

- **Nov 2021 – present** **Senior Blockchain Integration Engineer at Finoa, Berlin**

Joined an interesting crypto startup to work close to bare metal blockchain.

- **May 2021 – Oct 2021** **Senior Software Developer at Reserve, USA (remotely)**

The project that I built here was "the OFAC replacement", an algorithm, implementation and service for fuzzy name matching, to be used by the compliance team in the course of the "know your customer" approval process, to match customer names against several bad actors lists.

Python
some alchemy
a bit of
JS and React

- **2017 – Apr 2021** **Technical Lead at 3T Software Labs GmbH, Berlin**

Developed "Studio3T" – the best GUI tool for MongoDB. Worked with the great team to make it even better. Designed and implemented new features, refactored the existing code base, reviewed others' work. The specific areas included SQL to NoSQL translation, query plans, security and application architecture in general.

Java
MongoDB
SWT

- 2015 – 2016 Senior Software Developer at [FinReach GmbH](#), Berlin**

Developed a web application for switching bank accounts in a FinTech startup within a large Berlin incubator HitFox. It was a drastic change in every imaginable aspect – from back-end to front-end, from one stack to another, from Windows to Mac, from office cubicle to startup open space, finally from Russia to Germany.

Ruby/Rails
Bootstrap
Angular
JS + Coffee
MongoDB
- 2009 – 2015 Lead software developer at [Infosysco](#), Ekaterinburg, Russia**

Designed and developed a proprietary online banking system and related crypto security products (classic PKI w/operational procedures, digital signatures, TLS stack, web and desktop app), integration of various financial systems, such as credit card processing for customers.
Our product was rated the best online banking solution in Russia in [2013](#).

Python
C++
Delphi
PostgreSQL
crypto hw/sw
protocols
- 2011 Participated in Intel Parallel Programming contest “Acceler8”**

My solution ended up to be the fastest of the industrial kind. Unfortunately, a quirk in test data generation made it possible for the winners of that particular contest to cheat around having to parallelize computations efficiently and go for the direct single-threaded solutions.
The story was so intriguing that I [wrote a post](#) about it (in Russian).

C++
Intel TBB
x86
assembler
SSE intrinsics
- 2004 – 2009 Lead software developer at [Severnaya Kazna](#), Ekaterinburg**

Designed and developed a proprietary online banking system and related crypto security products, integration of various banking systems. Our product was rated the best online banking solution in Russia in [2006](#) and [2007](#).

Python
C++
MSSQL
PostgreSQL
crypto hw/sw
protocols
- 2006 Remote consultant/contractor at [ScriptLogic Inc](#), USA**

Designed and developed a product for tunneling TCP through HTTP for the purpose of defeating firewalls and proxy servers. Later part of [Desktop Authority](#), a secure desktop management software suite.

C++
WinSock
OpenSSL
- 2001 – 2004 Lead software developer at [CIFT](#), Ekaterinburg**

Designed and developed of proprietary financial systems, such as remote banking, stock accounting or OLAP reporting framework on top of MS SQL Server.

C++
Visual Basic
MS SQL
T-SQL
MS Access
crypto libs
- 2000 – 2001 Software developer at [SSI Micro](#), Yellowknife, Canada**

Built web sites for customers, written software for controlling various satellite networking hardware remotely.

FreeBSD, C
Apache
- 1998 – 2000 Software developer at [Uralvneshtorgbank](#), Ekaterinburg**

Built an interactive bank [web site](#) with a back-end connected to various information sources inside the network.

Windows NT
IIS, ISAPI
- 1996 – 1997 Database software developer, Ekaterinburg**

Designed and developed a database application for keeping records on archaeological sites and artifacts, also with media, photos and maps.

Windows 95
MS Access
Delphi

Education

Bachelor degree in mathematics, graduated in 1998 from the [Urals State University](#) in Ekaterinburg, Russia. Short-term post-graduate study in Russia-specific cryptography and information security.

References

“Dmitry is one of those rare developers that are incredibly strong both algorithmically as well as architecturally. He has profound knowledge across the board in software engineering and his level of professionalism has always been exemplary. But perhaps most importantly Dmitry is a very pleasant person that I have had the pleasure of having countless thought-inspiring conversations with over the years.”

– Dr. Thomas Zahn
Co-Founder and Managing Director at 3T Software Labs GmbH

“I have worked with Dmitry on multiple projects, and he always exceeded our expectations, he's one of the best experts in the field, it's really easy to work with him and Dmitry always bringing his 'A' game.”

– Rafi Nagli
Director of Product Development at ScriptLogic

“Dmitry is one of the best engineers I have pleasure to work with. In many projects he has been able to successfully think through the most complex business processes, architect comprehensive frameworks and apply existing technologies in most right way.”

– Mikhail Sidorov
Technical Director at NPO Sapfir (CIFT)

“I would heartily recommend Dmitry for any technical project, firstly for his technical skills, secondly for his professionalism, and lastly for his genuine warmth, patience, well-rounded education, and genuine interest in the world.”

– Jeremy Childs
Director of Development at SSI Micro