



# Andrii Sevastianov

C++ developer



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## About me

I am a software developer with a wide range of interests. I like mathematics, algorithms and high performance computations. Also I am interesting in programming languages, sometimes quite specific like Prolog, Rust or Ada. Machine Learning, Evolutionary Computations, Natural Language Processing, system programming are also in a list. One of my hobbies is abstract strategy games like chess, go, etc. and engine development for them.

## Skills

algorithms

concurrent programming

high performance

Python

C++

C

russian\*6 ukrainian\*6 english\*4

swedish\*1

(\*)[The skill scale is from 0 (Fundamental Awareness) to 6 (Expert).]

## Education

- since 1993 Comprehensive school Myrgorod/Kyiv/Poltava
- 1993–1997 Kharkiv Polytechnic University INCOMPLETE Kharkiv

## Awards

- 1993 III diploma on Ukrainian mathematics olympiad Rivne

## Experience

- 2020 Everguard.ai C++/Python/OpenCV/Tensorflow/Torch/Docker/CNN Industrial safety solution for steel factories in South Korea. SW part of a server application for computer vision, AI, and RTLS.
- 2019–2020 Smartling Go/C/nginx/Docker/Amazon Proxy server for automatic site translations. Custom modules for nginx to provide fast and safe web page translation.
- 2018–2019 Depositphotos Python/Keras/OpenCV/convolution NN/LSTM/GRU/Docker Photobank. Machine Learning techniques for image/video recognition and captioning. Working with convolution and recurrent NN, using pretrained net for feature extraction. Research.
- 2018 Depositphotos Golang/Python/Blockchain/Tendermint/MySQL Startup (frozen). Implementing private blockchain server with smart contracts. CTO, 5 developers.
- 2016–2017 Cambium Networks (contractor via Globallogic) C/Linux Drivers/Docker Improving Automatic Repeat Request (ARQ) part for proprietary long distance (up to 50 km) WiFi protocol.
- 2013–2016 Shopit AB C++/STL/MySQL/NLP Startup (not released yet) to search different kinds of products in the Internet. Developed a fast search server to handle user queries.
- 2011–2013 AMD (contractor via Luxoft) C/C++/Driver Development/WDDK The department developed video drivers as a part of a CAPS team created hardware abstract layer to hide die specific for Windows or Linux drivers.
- 2009–2011 Depositphotos C++/STL/Solaris/MySQL/NLP Photobank. Developed a fast search server that prefetches image database into shared memory object and is able to perform very effective search by query and attributes in different languages.
- 2007–2008 ASPEO ASP.NET/C#/T-SQL A several projects which was related to CRM systems.
- 2006–2007 EB (contractor via Ciklum) Delphi/C/Asm Implementing of a XP PC integrated compiler/test/simulation and debug environment for a proprietary control-programming-language for a middle size ARM7 controller.
- 2005–2006 Sumix C++/MATLAB Sumix products interferometers for checking optofiber surface quality. Developed and implemented 3D surface restoration algorithm for white light interferometry. Research.
- 2004–2005 Softline Delphi/T-SQL/PL SQL/Win API Document flow and design documentation for Antonov's plain plant.
- 2003–2004 Softline Delphi/T-SQL/PL SQL/Win API Document flow for Kyivstar GSM operator.
- 2002–2003 Viacom ASP.NET/VB.NET/T-SQL Planning, billing and time accounting for medicare organizations.
- 1999–2002 UKRPROMENERGO DOS+RTKernel/Borland C++ 3.1 A boiler and an oilstation automatic control system.

## Buzzwords

langs	Ada (2012), Asm(EVM, x86, x64, Z80), C (gcc gnu99, djgpp, Turbo), C++ (11, Borland, clang, g++, MS), C#, Delphi, Go, Lua, MATLAB, Pascal, Prolog, Python, R, Rust, Solidity, VB.NET
os	Linux, FreeBSD, Solaris, DOS, Windows
tools	autotools, awk, bash, docker, ipython, git, glide, perforce, pip, svn, vim
lib/framework	Allegro, asyncio, COM, CUDA, Delphi RTL, Delphi VCL, Delphi dx-components, Ethermint, LEX + YACC, numpy, OLE, OpenCL, OpenCV, pandas, RT Kernel, Scikit-Learn, STL, Tendermint, tensorflow, Turbo Vision, WDDK, WDDM, Windows API, wxWidgets, .NET
db	ADO, Cahcé, NoSQL, SQL (Firebird, Interbase, MySQL, PL-SQL, T-SQL, MySql)
typesetting	LaTeX, TeX
ai	CNN, RNN, tf, keras, torch, rule based
web	ASP.NET, DOM, HTML, JavaScript (pure), PHP (pure), VBScript, XML
misc	agile/scrum, compiler dev, driver dev, eXtreme programming, GUI, literate programming, multithreading, REST API, WEB

## Publications

2015	(russian) <a href="https://habr.com/ru/post/272815/">https://habr.com/ru/post/272815/</a> Magic bitboards and russian draught move generation.
2015	(russian) <a href="https://habr.com/ru/post/272707/">https://habr.com/ru/post/272707/</a> Bit magic: generating next lexicographical combination.

## Pet projects

2019	<a href="https://github.com/mustitz/paper-football/">https://github.com/mustitz/paper-football/</a> C/autotools Engine for playing in abstract strategy paper-and-pencil game <a href="#">Paper Soccer</a> . It is used in Android <a href="#">AI Paper Soccer</a> application in Google Play store.
2016–2017	<a href="https://github.com/mustitz/yoo-ofsm/">https://github.com/mustitz/yoo-ofsm/</a> C/OpenCL/autotools Finite state machine (FSM) synthesis and optimization. FSM binaries for fast calculation hand strength in several poker games (Texas Hold'em, Omaha, 6+ Hold'em) are provided as example.
2015–2018	<a href="https://github.com/mustitz/checkers/">https://github.com/mustitz/checkers/</a> C/autotools/Python Engine for playing in Russian Checkers. It uses MCTS for move selection. Magic Bitboard Techniques is used for fast move generation. Endgame database are generated and supported. Using NN in a spirit of AlphaZero is planned. Engine sometimes available to play online: <a href="http://mustitz.host.funtoo.org:2201/">http://mustitz.host.funtoo.org:2201/</a> .
2019	<a href="https://github.com/mustitz/paper-football/">https://github.com/mustitz/paper-football/</a> C Paper Soccer Abstract Logic game engine based on MCTS. It is used in the following Android application: <a href="#">AI Paper Soccer</a> .

## Interests

Popular science, mathematics, chess, squash, biohacking.