

Resume

Personal data

Name: Sergey B. Voinov

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Objective

I would like to get a Senior/Principal Engineer job and working on challenging projects involving interdisciplinary R&D, product prototyping, design and implementation. Relocation and business trips are welcome.

Summary

I've got 25 years of experience in software and electronics engineering applied to telecommunications, industrial automation, embedded software, compilers, digital signal processing, computer graphics, low-level systems programming, scientific software and hardware development.

Employment

- **2010-Present time. Forte-IT Company Group** (Forte-IT <http://www.forte-it.ru>, Forte-CT <https://forte-ct.ru>, ExpertSolutions <https://expertsolutions.ru>, TelSoft <https://tel-soft.ru>). Principal Software Engineer. Design and implementation of brand-new software for 3G/4G telecom networks (TAS, IMS, SIP, IVR, video streaming, audio codecs) for JSC Vimpelcom (<https://beeline.ru>, branch of VEON Ltd. <https://www.veon.com>). Support of existing software products.
- **2012-Present time. Federal Research Center of Problems of Chemical Physics and Medicinal Chemistry RAS** (<https://www.icp.ac.ru>). Chief Software and Electronics Engineer. Software development for new scientific VHF laboratory equipment for solar panels research. Programming, debugging, repairing and maintaining microprocessor-driven high-vacuum machines.
- **2013-2020. Creative Mechanics Ltd.** (<https://www.creativemechanics.ru>). Chief Software and Electronics Engineer. Software and hardware design and implementation for industrial automation. Repairing, upgrading and programming of laboratory equipment.
- **2010-2013. Mayak-93 Research & Production Enterprise.** (<https://mayak-93.fis.ru>). Senior Software and Electronics Engineer. Software and hardware design, implementation and support for automation of plastic tubes production.
- **2009-2010. Samsung Electronics** (<https://www.samsung.com>). Senior Engineer. Research, design and implementation of new algorithms for future versions of Flash memory software layer (Flash Translation Layer).
- **2007-2009. Intel Corporation** (<https://www.intel.com>). Senior Software Engineer and Team Lead. Design and implementation of new algorithms for Intel's brand-new processor architecture involving binary translation. Support of code generation component of Intel C/C++ compiler. Team Lead of dynamic optimizations research group. Team Lead of unified binary translation infrastructure team. Development of runtime environment for IA-32 binary translation project

- **2002-2007. Forte-IT Co. Ltd.** (<http://www.forte-it.ru>). Senior Software Engineer and System Architect. Development of distributed architecture for Interactive Voice Response system. Computer telephony applications development. High-level scripting language, compiler, IDE, runtime environment development and implementation.
- **1999-2007. Russian State Technological University named after K.E. Tsiolkovsky (MATI)** (Now it is MAI's branch <https://en.mai.ru>). Senior Tutor and Assistant Professor. lecturing courses "Computer Architecture and Design", "Computer Graphics", "Operating Systems", "Systems Software". Supervision of undergraduate students. Assisting at academic and science conferences.

Professional knowledge and skills

I am most proficient and experienced in C/C++, Assembler x86, digital electronics and microcontrollers. And also have strong skills and much experience in the following:

- **Programming languages:** C#, Python, Go, Pascal/Object Pascal, Java/Java Script, VB Script, Lisp, Prolog, Fortran, compiler generators (Lex, Bison).
- **Technologies and APIs:** IPC/ITC, RPC, COM/DCOM, Win32 API, .NET, Sockets API, HTML/DHTML/XML, ADO, ASP, ASP .NET, SSI, CGI, Internet protocols (HTTP, FTP, SMTP, POP3, SSL/TLS, DNS, etc.), OpenGL, DirectX. Design and implementation of distributed applications.
- **Operating systems:** system (compilers, translators, services, etc.) and application software development (including GUI) for Windows and Linux; fluent knowledge of Windows APIs and internal infrastructure.
- **Telecommunications:** 3G/4G networks architecture and protocols (IVR, IMS, TAS, SIP/SDP, RTP, Diameter); audio codecs.
- **Digital signal processing:** digital filtering (FIR, IIR filters), Fast Fourier Transform, Wavelet Transform, audio processing (resampling, normalization, effects), image processing (transformations, enhancement, color adjustment and color space conversion, compression and decompression).
- **Microprocessor and microcontroller architectures:** Intel x86, Intel IPF, Intel 8051, Microchip PIC, ARM, AVR, STM32. Embedded software development.
- **Full cycle electronics design** (schematics, PCB, simulation, debugging, assembling, production) using AutoCAD Electric and Proteus.
- **Hardware design** using Altera FPGA/CPLD chips and System Verilog in Quartus IDE.
- **3D modeling** using SolidWorks, AutoCAD and 3DS Max.
- **Machine learning and AI** using Python.
- **Networking:** planning and deploying Ethernet networks; network maintenance; DHCP and DNS configuration; NAT and VPN service configuration; Internet and Intranet configuration for private networks; Firewall software installation and configuration, good TCP/IP stack knowledge (IP, TCP, UDP protocols).
- **Computer graphics:** demos and games development using OpenGL and DirectX, software rendering, ray tracing, image processing.
- **Computer hardware:** assembling, repairing, upgrade, maintenance.
- **Computer Science:** good knowledge of discrete mathematics, theory of algorithms and data structures.
- **Natural languages:** fluent English at pre-advanced level (also professional-oriented, strong writing skills – emails and technical documentation).
- Excellent multi-threaded software development and debugging skills in distributed and multi-process environment.
- Ability of writing high-quality code at alarming rates.

- Ability of quick studying new technologies and immediately applying them in practical tasks; desire to study new technologies, computer architectures, natural and computer languages.

Education

1997-2003. Russian State Technological University named after K.E. Tsiolkovsky (MATI) (Now it is MAI's branch <https://en.mai.ru>). Faculty of Information Systems and Technologies, Department of Information Technologies. Master of Science in Software Engineering. Major area: software engineering. Minor area: digital signal processing. Diploma with honors. GPA: 5.0.

1995-1998. Moscow Instrument-Making Technical School (<https://mpt.ru>). Technical Specialist in Computer Hardware maintenance and Software Engineering. Diploma with honors. GPA: 5.0.

1988-1994. Moscow elementary and middle school 768, 363.

Certifications

- Certificate of completing associational-functional method course of English, 2000.
- Microsoft Certified Professional (MCP), 2002.
- Design Technology of Altera Programmable Logic Integrated Circuits, 2017.

References

References, publications, conference papers, awards/grants, patents and code/schematics samples are available upon request.