

Sheroz Khaydarov

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OBJECTIVE

I am passionate about building highly efficient, secure, and robust systems based (preferably) on Rust and/or Go (Golang) technologies.

Ideally, combining the great technologies above with a remote (or Istanbul-based hybrid) and part-time position would be my dream composition, so I can earn a sufficient family income and could contribute the remaining time to open source and/or educational projects.

KEY SKILLS

Rust, Go, Java, JavaScript, Ruby, Databases, Security, Cryptography, Web Services, Docker

SUMMARY

- Proven experience in software engineering across multiple technologies, including the development of web, desktop, mobile, embedded, database, network, cryptography, scientific, military, and security-related applications, systems, and services
- Hands-on experience in all phases of the software development life cycle, including requirements gathering and analysis, preparing technical specifications, architectural design, development, testing, quality assurance, deployment, maintenance, and support
- Good knowledge and extensive practical experience in designing and coding functional, reliable, secure, scalable, and efficient software; integration of software platforms, research, analysis, engineering, reverse-engineering; solving technical problems to ensure timely delivery of required outputs and achievement of measurable results.
- Deep experience in driving technical-development activities and day-to-day management of development teams. Skilled in building high-performing teams: interviewing, hiring, inspiring, motivating, engaging, coaching, mentoring, and guiding team members in their career path and professional growth.
- Good experience in e-Government-related development, including business process analysis, requirements analysis, technical analysis, IT infrastructure, architecting, designing, and practical implementations.
- Good knowledge of electronics, IT hardware and networks, GSM networks at SS7/MAP level, designing, setting up, and managing of computer networks, structured cabling systems, network security basis, firewalls, and intrusion detection systems
- Education: Engineer, Construction and Technology of Radio Electronic Devices (Master of Science), diploma with honors, Tashkent State Technical University, Uzbekistan (ex-USSR), 1990 –1995
- For more details, please, take a look at my portfolio page: <http://sheroz.com/more-details>
This direct link is not accessible within the site navigation

WORK EXPERIENCE

Technical Lead, Senior Manager (May 2022 - Present, Full-time)

Technical Lead, Manager (Mar 2021 - May 2022, Full-time)

Senior Software Engineer, SMTS (Jul 2019 - Mar 2021, Full-time)

Analog Devices (NASDAQ: ADI), <http://analog.com>

Former **Maxim Integrated** (NASDAQ: MXIM), acquired by **Analog Devices** on August 26, 2021.

Istanbul Design Center: ITU ARI-3 Teknokent, Maslak, Katar Cad. No:4, Sariyer, 34467, Istanbul, Turkey

Activity: Analog Devices is a world leader in the design, manufacture, and marketing of a broad portfolio of high-performance analog, mixed-signal, and digital signal processing (DSP) integrated circuits (ICs) used in virtually all types of electronic equipment.

Technologies: NDA

- Led and contributed to the development of the Electronic Design Automation (EDA) platform and tools

Lead Software Engineer, Manager (October 2017 – April 2019, Contract)

Senior Software Engineer, Solution Architect (January 2017 – October 2017, Contract)

Wordapp B.V. Amsterdam, Netherlands. <http://wordapp.com>

Istanbul Office: Taksim, Kocatepe Mh., Sehit Muhtar Bey Cad. No:31/2, Beyoglu, 34437, Istanbul, Turkey

Activity: Wordapp develops and operates SEO & SEM-optimized content processing platform with a mission to help people and companies monetize their language assets.

Technologies: Ruby on Rails, Go, JavaScript, AngularJS, ReactJS, PostgreSQL, MongoDB, Redis, Docker, Amazon AWS EC2/S3, REST API, TDD, RSpec, Selenium, GitHub, SVN, Jira, Scrum, Kanban

- Led the development team (10+ developers) and was fully responsible for technical deliverables
- Analyzed business requirements, prepared concepts, and technical solutions; Planned roadmaps and milestones by breaking down the development into sprints, epics, stories, and tasks; Assigned and monitored the execution of tasks; Managed product backlog, Scrum and Kanban boards, GitHub repositories.
- Facilitated and led the process of integrating the Wordapp platform with 3rd party apps. Made research and coded content analyzing methods and web-engine recognition patterns for WordPress, Drupal, Joomla, and Magento-based websites. Designed the general concept and implemented the integration with WordPress-based websites by using strong cryptography and digital signature-backed techniques to achieve secure and scalable authenticity and authorization mechanisms. The completed integration had a great business impact and significantly accelerated the content publishing flow, allowing Wordapp to massively scale up its content business and make more than **€1 million** in revenue in the first year. The open-source plugin is published on the global WordPress Plugin Directory: <https://wordpress.org/plugins/wordapp>
- Facilitated a process for enabling self-service in the app by analyzing and scraping websites to enable users to build content templates, domains, and quick orders. Implemented a validation mechanism for new orders and duplication checks.
- Facilitated a process for enabling self-service in payment-related functionalities. Actively participated in integrating the **Hyperwallet** platform for **wire transfers**, the **BillPro** platform for **credit card processing**, and **PayPal** payments, including the generation of the respective receipts and invoices.
- Integrated the **Google Ads** (Adwords) platform to connect Google Ads business accounts for enabling continuous improvement of ad performances by using the crowd of writers/editors
- Designed and implemented a quality scoring algorithm to make a fair cost distribution between crowd writers and editors, based on their contributions to the creation of final content.
- Made research to execute time-critical tasks through a **Rust & Go**-based REST API. Developed **Go**-based web scraping and translation tools
- Facilitated the migration of sensitive and transactional data from **MongoDB** into **PostgreSQL**
- Managed AWS EC2 Linux servers, developed shell scripts to automate DB backup operations
- Coordinated activity of the QA team, including the design and implementation of test scenarios for RSpec-based API tests and Selenium WebDriver-based End-to-End tests

- Interviewed (200+) and hired (10+) developers. Developed Google Apps Script-based PDF parser (ATS) to accelerate the hiring process by parsing and ranking tons of CVs
- Mentored junior developers and guided them in their career paths.

Software Engineering, Consultant (March 2016 – Present)

DreamLogic, Istanbul, Turkey. <http://dreamlogic.io>

Technologies: Rust, Go, Flutter, JavaScript, Microservices, Databases, Docker, GitHub, GitLab, Jira

- Provided software development services for **Wordapp** (the entire contract) and **Maxim Integrated** (for a period during the pandemic, when I had to go back to my home country) via a B2B contract
- Made technical analysis, proposed the system architecture and design for the **Dokon**, on-demand delivery service. Built the core development team in the **Tashkent office**: prepared requirements, screened, interviewed, and hired team members. Provided overall technical consultancy and guided the team development towards successful project delivery.

Lead Developer, Principal Architect (January 2014 – December 2015, Contract)

UNICON.UZ Scientific-Engineering and Marketing Research Center of the Ministry for Development of Information Technologies and Communications of Uzbekistan. Tashkent, Uzbekistan. <http://www.unicon.uz>

Technologies: Java, Spring, JPA/Hibernate, PostgreSQL, Oracle, IBM DB2, Big Data, Web Services, WebSocket, Maven, SVN, Git, Tomcat, Redmine, Cryptography, PKI

- Led the development of e-Government-related projects, including:
 - National Document Management System E-IJRO (Multi-tenant Architecture, SOA-based data exchange, serves 5000+ organizations)
 - e-Court systems for Civil (E-SUD) and High Economic Courts
 - Customs Declaration System (T6) for the State Customs Committee
 - Nationwide Interoperability, Data Exchange and Identification System (EDX, the core of the SOA-based Data Bus for enabling interoperable e-government services)
 - Unified Application Development Platform (a core framework and components for building and deploying e-government systems, services, and applications)
 - R&D-related activities to increase performance, scalability, and availability of developed services and systems
- Managed the day-to-day implementation of technical-development activities of software development and IT support teams (20+ developers)
- Developed long-term and short-term technology strategies, tactics, plans, priorities, roadmaps, and milestones. Tracked the progress of software projects; Made risk analysis and business-focused oversight of R&D activities
- Made requirement analysis, technical analysis, and architectural design, and participated in the preparation of software requirement specifications (SRS), ATP, and other documents
- Managed conflicts and tough situations. Inspired, motivated, and mentored the team members in various areas of software engineering, including core/web technologies and security-related tasks to timely achieve business goals and objectives

Senior Software Engineer (March 2014 – December 2015, Full-time)

INTSOFT SERVICE LLC, Tashkent, Uzbekistan

Technologies: Qt C++, Java, Web Services, WebSocket, PostgreSQL, SVN, Git, Cryptography, PKI

- Led the development of the **Security Service Provider (SSP)** named **KALKAN** which enabled seamless integration of Web applications with e-Government services and the e-Government PKI platform, ensuring secure network communications between web applications and back-end services:
 - Qt C++-based client components for Desktop and Mobile users. The provider communicates with the application server through a custom crypto tunnel, wrapped in SSL
 - WebSocket-based API for authentication, file uploading/downloading, data exchanging, digital signature generation/validation, crypto, and other security-related operations
 - Java-based server-side components for API functions
- Investigated technology solutions, designed and developed a secure, high-speed binary protocol for enabling interactive IP communications and real-time text, voice, and video messages, including

authentication, heartbeats, and error handling functions; Coded Qt C++-based client library and Java-based server components

- Investigated and coded a secure NAT traversal and UDP/TCP hole punching technique for enabling secure VoIP, P2P networking, and file-sharing operations. Implemented a Qt C++-based client library and a Java-based trusted third-party STUN (Session Traversal Utilities for NAT) server

Lead Developer, Architect (February 2015 – June 2015, Contract)

European Union's DCI Programme, EC Project: Further Strengthening of the Bi-Cameral Parliamentary System and Networking with Regional Assemblies. Tashkent, Uzbekistan

Technologies: Java, Spring, JPA/Hibernate, Oracle, Big Data, Digital Signatures, and PKI

- Led the development of the **e-Archive system** for the Supreme Assembly of Uzbekistan
- Analyzed requirements and prepared software requirement specifications (SRS)

Team Leader, Architect (October 2013 – June 2014, Contract)

Net Extensions LLC, Tashkent, Uzbekistan. <http://www.uzgps.uz>

Technologies: Java, Spring, JPA/Hibernate, WebSocket, PostgreSQL, GPS/MAP, Maven, SVN

- Led the development of the **GPS-Based Web Tracking System** that provides real-time geo-locations on the map, route tracking, appointing of ZOI (zones of interest) and POI (points of interest), controlling of desired events: violations on the route, speed limits, fuel dumping, etc.
- Made technical analysis, proposed the system architecture and design, prepared the software requirement specifications (SRS) and other documents
- Built the core development team: interviewed, hired, and mentored developers. Introduced development tools for the Java-based environment

E-Government Specialist, ICT Consultant, Developer (April 2011 – February 2014, Full-time)

United Nations Development Programme, Tashkent, Uzbekistan. <http://undp.uz>

UNDP Project #00074296: Local Governance Support Project, <http://www.lgsp.uz>

Technologies: Java, Spring, JPA/Hibernate, PostgreSQL, MySQL, Jabber/XMPP, Maven, SVN

- Facilitated and led the development of the new version of the **National Document Management System** named **e-Hujjat**, which has been migrated into the Java platform and **SOA** architecture
- Deployed the **e-Hujjat** systems in pilot regions, covering 27 local government authorities
- Assessed needs and analyzed the IT capacity of social and communal service agencies to provide government services through the e-Government's **One-Stop-Shop** (OSS) and coordinated the process of the deployment of the OSS system in pilot regions
- Led the development of an **Online Education Portal** for the Academy of Public Administration of Uzbekistan (<http://max.dba.uz>). Conducted training sessions in the pilot regions.
- Head-hunted, interviewed, convinced, and recruited (20+) qualified IT specialists, business analysts, coders, designers, system admins, and trainers. Supervised work of the contracted consultants by ensuring their contribution to the project goals, including preparation of TORs, planning, monitoring, and assisting in the preparation and evaluation of reports
- Mentored local specialists in managing deployed IT systems, servers, and networks

R&D Team Leader, Senior Software Engineer (June 2010 – December 2010, Full-time)

Sunet Technology LLC, Tashkent, Uzbekistan. <http://www.sunet.uz>

Activity: Mobile and Telecommunication Infrastructure Development, System Integration

Technologies: C, C++, Java, SMS, USSD, SMPP, SS7/MAP, SIGTRAN, TCP/IP, Ant, Maven, SVN

- Led the development of the distributed gateway system for high-speed **SMS** and **USSD** services based on **SS7** over **SIGTRAN**. Designed and coded core components: the server-side (C/C++, Linux) and client-side (Java) libraries
- Led the development of the SMS gateway based on **SMPP** protocol (Java); including support for multi-tenancy, splitting, and merging long (concatenated) messages, prefix-based routing for outgoing messages, on-fly encoding recognition, and transliteration into Latin letters;

- Deeply investigated and coded **SS7 MAP** flow states for single and combined **SRI-SM, forward-SM**, network initiated, and push/pull **USSD** services; including direct **HLR/VLR/MSC** and B-party addressed messages, **GT** translation rules;
- Designed and coded a high-speed TCP/IP socket server-based binary protocol for remote execution of single and combined SS7 MAP operations, data exchange, and RPC;
- Managed the day-to-day implementation of the technical-development activities of the core team; analyzed and solved technical problems;
- Installed and configured the SS7 stack (Linux). Installed and administered team development server (W2K3), Subversion (SVN) server, and Maven repository;
- Actively participated in requirements analysis sessions, architecture, system design, and the preparation of software & hardware requirement specifications (SRS), ATP, and other documents.

Senior Java Developer, System Architect (December 2006 – January 2010, Full-time)

United Nations Development Programme, Tashkent, Uzbekistan. <http://undp.uz>

UNDP Project #00050777: Strengthening decision-making processes of the Ministry of Economy of Uzbekistan for better efficiency and effectiveness

Technologies: Java, Spring, Hibernate, Struts2, Crystal Reports, Oracle, PostgreSQL, Maven, SVN

- Led the development of e-Government tools for the Ministry of Economy of Uzbekistan:
 - Data Collecting and Processing System (central database system) (**Java / Oracle**)
 - Document Management and Collaboration System (**Alfresco ECM**)
 - Web portal and Intranet portal (**Drupal PHP / Liferay Portal Java**)
- Managed the day-to-day implementation of technical-development activities, analyzed and solved technical problems by ensuring timely delivery of project results
- Installed and configured server operating systems, database and application servers, corporate network, routers, and firewalls, including manual assembly of server and network racks, and a remote access VPN server for secure connection of regional departments
- Prepared software requirement specifications, user manuals, and other documents. Made technical analysis and procurement plans for software and hardware components

Freelance Developer (February 2006 – December 2007, Part-time)

Remote: USA, EU (rated as Top Coder with excellent rating)

Personal profile: <http://www.freelancer.com/u/Sheroz.html>

Technologies: C, C++, Java, Assembler, VB, Databases, JavaScript

Completed Projects:

- Medical software and clinical laboratory programs for Arizona State University
- Database for tracking employee and clients' activity, electronic billing, reports, and forms
- Web-based online product calculator for a US-based wholesale company
- Rifle machine-based, embedded application. User interface design, frequency database, low-level signal generation module, and schedule logics, coded embedded touch-screen interface
- Online stock trading software using open source libraries and IB TWS API

Software Engineer, Cyber Security Consultant, (June 2004 –July 2006, Full-time)

The Center of Information Technologies, Tashkent, Uzbekistan

Tashkent University of Information Technologies

Technologies: C, C++, C#, Assembler, Java, Databases, DSP, Cryptography, PKI

- Coded mission-critical, cryptography-based, and security-related software applications and utilities, including the development of digital signatures and PKI-based, secured real-time document management, voice, and instant messaging system
- Made research on securing computer systems, accident prevention, and protection systems
- Actively participated in the development of the concept of the e-Government Information and Telecommunication System for the Government of Uzbekistan, including best practices learned from other countries, organizational diagrams, general architecture, network structures, and flow charts
- Consulted and trained in software development (C, C++, Assembler, Databases)

Software Engineer (January 1998 – June 2004, Full-time)

Subhinur Joint-Stock Company, Tashkent, Uzbekistan

Technologies: C, C++, VBA, MS SQL Server, MS Access, Visual FoxPro, JavaScript

- Developed business-related applications, including accounting, banking, invoicing, and various databases
- Developed internet-related applications and various websites
- Consulted in the design, installation, and administration of computer networks

Software Engineer, Head of Computer Centre (March 1994 – December 1997, Full-time)

Transport Enterprise #2515, Tashkent, Uzbekistan

Technologies: dBase, FoxBase (Karat), FoxPlus, FoxPro, Visual FoxPro

- Coded new modules to the enterprise automation software to extend its functionality
- Managed the enterprise database system

Computer Engineer (May 1993 – March 1994, Part-time)

The State TV and Radio Broadcasting Company of Uzbekistan, Tashkent, Uzbekistan

Technologies: Assembler, MASM, TASM, C, Turbo C, Turbo Pascal

- Developed utilities, installed and maintained system software
- Maintained computer hardware, upgraded, analyzed, and replaced defective electronic components

EDUCATION

Engineer, Construction, and Technology of Radio Electronic Devices (comparable to **Master of Science**)

Tashkent State Technical University, Uzbekistan. 1990 - 1995

- Degree: **Engineer (Electronics Engineering, Speciality code: #2303, Ex-USSR)**
- Degree work: **Designing a microprocessor-based, multi-channel, and self-tuning adaptive controller**
- Diploma with honors, comparable to Master of Science degree ([link to the original diploma](#))
- Diploma equivalency certified in Turkey with **DENKLIK BELGESI** ([link to the certificate](#))

Ph.D. Studies and Research in "Predictive Adaptive Control Systems"

Tashkent State Technical University, Uzbekistan. 1995 – 1997

TRAINING COURSES

- Information Security of Telecommunication Systems, Academy of Special Communications and Information Services of Russian Federation, Orel, 2005
- Modern Educational Technologies, Centre of Innovation Technologies, Tashkent, 2004
- Mastering COM Development Using Microsoft VC++, Microsoft Course 1012, Tashkent, 2002
- IBM PC Hardware, Technical Education Centre of Uzbekistan, Tashkent, 1993

LANGUAGES

- **English:** fluent, professional working proficiency
- **Turkish:** fluent, professional working proficiency
- **Russian:** fluent, professional working proficiency
- **Uzbek:** native
- **Arabic:** basic, elementary proficiency

CERTIFICATIONS

- **MCSD** - Microsoft Certified Solution Developer, since 2002
- **MCP** - Microsoft Certified Professional, since 2002

Microsoft Certification ID: **2709685** ([link to the certification transcript](#))

- 70-015: Designing and Implementing Distributed Applications with Microsoft Visual C++
- 70-016: Designing and Implementing Desktop Applications with Microsoft Visual C++
- 70-100: Analyzing Requirements and Defining Solution Architectures
- 70-229: Designing and Implementing Databases with Microsoft SQL Server

SKILLS

Rust, since 2019

Go, since 2019

Ruby, 2017 - 2019

- Rails 4/5, Mongoid ODM, RubyMine, Capistrano, RSpec, Capybara

Java, since 2005

- Core, Concurrency, TCP/IP, JNI, Servlets, JSP, SOAP, RESTful, JDBC, EJB 3.0/JPA,
- Spring, Struts2, Hibernate, Big Data (Apache Hadoop/HDFS, MongoDB/GridFS), Jabber/XMPP, JUnit
- Tomcat (Native/APR + NGINX / HTTPD), JBoss, Jetty
- IntelliJ IDEA, NetBeans, Eclipse (basic), ANT, Maven

.NET Technologies, since 2005

- MS Visual C#, OpenXML, VSTO, MS Office Add-ins, ADO.NET, Microsoft Visual Basic, VBA Access, VBA Excel

JavaScript, since 1997

- jQuery, AngularJS, Angular (basics), ReactJS (basics), VueJS (basics)

C and C++, 1993 - 2015

- Qt C++ (Windows/Linux/Android), Multithreading, TCP/IP, Audio/Video Processing
- Microsoft Visual C++, SDK, MFC, ATL, ActiveX, COM, ADO, DAO, ODBC
- Borland C++ Builder, Borland C++, Borland Turbo C, Bloodshed Dev-C++
- NetBeans, GNU GCC, cc, g++ (Unix/Linux)

Assembly and Low-Level Debuggers, 1988 - 2006

- MASM32, MASM, NASM, TASM, ZEUS (CPU: Intel 80x86, Intel 8080, Z80, 6502)
- OllyDbg, IDA, Soft-ICE

Databases, since 1994

- PostgreSQL, MySQL, Oracle, IBM DB2, Microsoft SQL Server, Microsoft Access, MongoDB, Redis
- dBase: Microsoft Visual FoxPro, FoxPro, FoxPlus, FoxBase, Karat /1994-2000
- ANSI SQL, NoSQL, PL-SQL, T-SQL, Stored Procedures, Query Optimization

Cryptography, since 2003

- Symmetric Ciphers, Asymmetric Ciphers, Hash Functions, Steganography, Multi-Precision Arithmetic, Digital Signatures, Public Key Infrastructure (PKI)

Version Control Systems

- Git, GitLab, GitHub, Perforce, Subversion

Project Management, Methodologies & Tools

- Waterfall, Agile, Scrum, Kanban, Atlassian JIRA / Confluence, Redmine

Quality Assurance & Testing

- JMeter, Apache Bench, Selenium WebDriver, Unit tests, Web Browser Automation

Reports

- JasperReports, Crystal Reports, Crystal Reports Server, Microsoft Access

Web Programming & Web Services, since 1997

- HTML, CSS, Bootstrap, HTTP, Web Sockets, REST API, SOAP

Other

- Google Apps Script, OAuth, Drive API, Sheets API
- PHP, Twig, PhpStorm, WordPress CMS + Plugin development, Drupal CMS
- Amazon Web Services (AWS EC2 / S3), Linode
- Containerization and Virtualization Technologies: Docker, Vagrant, VMware, VirtualBox
- Liferay Portal + Portlet development, Alfresco ECM
- Apache HTTPD (.htaccess), NGINX (Load Balancing, SSL Termination)
- Amulet GUI programming (μ HTML, widgets, UART) / 2006
- Trading Platforms: MetaTrader 4 (MQL4, DLL C++), IB Trader Workstation (IB TWS API, C++, Java)
- Basic, QBasic, GW-Basic, Pascal, Turbo Pascal / 1988-1995
- Scaling, Load Balancing, High Availability, Failover
- OOP/D, DI/IOC, AOP, TDD, UML, Design Patterns, Secure Coding, and Network Security Basis

Networks

- GSM Networks and Mobile Services (SMS, USSD, SMPP, SS7/MAP, SIGTRAN, MSC, HLR, VLR)
- TCP/IP Protocol Stack (IP,ICMP,TCP,UDP,ARP,RARP,DHCP,DNS,NAT,IPSec,SSH,TLS/SSL,HTTP,FTP,SMTP,POP, SIP,XMPP)
- MS Windows (AD, VPN, ISA, CA, Exchange), Linux (routing, squid, Samba, OpenVPN)
- Wireshark, Ethereal, Iris, tcpdump

Operating Systems

- Microsoft Windows (3.11 - 10), MS-DOS
- Linux (CentOS, Fedora, Ubuntu, SUSE), Unix (FreeBSD, OpenBSD, Solaris)
- macOS