

Sheroz Khaydarov

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KEY SKILLS

Rust, Backend, Web Services, Networks, Distributed Systems, Clustering, Databases, Cryptography, Security

SUMMARY

- Proven experience in software engineering across multiple technologies, including the development of web, desktop, mobile, embedded, database, network, automation, science, medical, defense, cryptography, and security-related applications, systems, and services.
- Hands-on experience in all the phases of the software development life cycle; requirements gathering, analysis, and preparing technical specifications; design, development, testing, quality assurance, deployment, maintenance, and support; identifying gaps, addressing bottlenecks, and solving technical problems to ensure timely delivery 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: screening, interviewing, mentoring, involving, inspiring, and helping in the professional growth of the team members.
- Deep experience in e-government-related development, including analyses of business processes and technical requirements, design, development, and practical implementations.
- Good knowledge of electronics, IT hardware, IP networks, and telecommunication networks at SS7/MAP level, network security basis, and firewalls.
- Education: **Electronics Engineering**, diploma with honors (**Engineer/Master of Science**), Tashkent State Technical University, Uzbekistan (ex-USSR), 1990 - 1995.
- Languages: **English** (fluent), **Turkish** (fluent), **Russian** (fluent), **Arabic** (elementary), **Uzbek** (native)
- Please check out my profile page for a more detailed overview: <http://sheroz.com/profile>

PROFESSIONAL EXPERIENCE

Senior Rust Developer January 2024 - Present
NXLog, <http://nxlog.co>

Activity: NXLog is a multi-platform log management solution for collecting and centralizing log data.

Technologies: Rust, Distributed Systems, Clustering, RAFT, Network API, REST API, RPC, Vault, PKI, RocksDB

- Contributed to the development of specific components of the log management platform
- Engaged with product and other teams to clarify requirements and discuss trade-offs
- Analyzed requirements and prepared design, architecture, and other documents

Professional Development / Career Break January 2023 - December 2023

Technologies: Rust, Multithreading, Async, Network API, REST API, Databases, Cryptography, Security, GitHub

Developed Rust-based open-source projects: <https://github.com/sheroz>

Technical Lead, Senior Manager May 2022 - January 2023
Technical Lead, Manager Mar 2021 - May 2022
Senior Software Engineer, SMTS Jul 2019 - Mar 2021

Maxim Integrated (NASDAQ: MXIM), <http://analog.com>

Maxim Integrated was acquired by **Analog Devices, Inc.** (NASDAQ: ADI) on August 26, 2021.

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

Activity: Designing and manufacturing mixed-signal and digital signal processing integrated circuits, embedded security, sensors, and microcontrollers.

Technologies: Rust, Go, C#, Java, REST API, gRPC, PostgreSQL, VSTO, OpenXML, Docker, GitLab, CI/CD, EDA

- Led development across international teams located in San Jose (California/US), Dallas (Texas/US), Istanbul (Turkey), and Bangalore (India)
- Designed, developed, and maintained back-end (**Go, Java, Docker**) and front-end (**C#**) related specific components and features of the **Electronic Design Automation (EDA)** platform and tools
- Evaluated **Rust** and **Go**-based technologies for preventing memory leaks and increasing efficiency
- Engaged with product engineering and other teams to clarify requirements and discuss trade-offs
- Made substantial contributions to stabilizing tests, eliminating sporadic failures, and ensuring hardware independence. Actively advocated for the use of CI/CD to improve product quality.
- Contributed to improving the existing EDA platform and development processes by:
 - re-designing and running backend services in **Docker** (Linux) containers, which improved the stability by using resources efficiently, and speeding up development and release workflows
 - introducing **Go**-based backend microservices, which enabled faster and more efficient development and deployment processes
 - migrating databases to **PostgreSQL** which improved operational cost and development flexibility
 - migrating codebase to an in-house **GitLab** and wide adoption of **CI/CD**, which resulted in streamlined development, improved team productivity, and faster delivery of releases

As a result of these extensive re-design efforts, the development process became smoother, and the backend platform achieved robustness, leading to the elimination of service failures and the need for frequent restarts of VM, OS, or services, which were previously commonplace

Lead Software Engineer

October 2017 - April 2019

Senior Software Engineer

January 2017 - October 2017

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 an SEO & SEM-optimized content processing platform with a mission to help people and companies monetize their language assets

Technologies: Rust, Go, Ruby on Rails, JavaScript, AngularJS, ReactJS, Python, 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 responsible for technical deliverables
- Analyzed business requirements; prepared concepts and technical solutions; planned roadmaps and milestones by breaking them down into sprints, epics, stories, and tasks; assigned and monitored the execution of tasks; managed product backlog, Scrum and Kanban boards, and GitHub repositories
- Ensured seamless collaboration between the backend, frontend, design, and quality assurance teams
- Proposed and led the integration of the Wordapp platform with 3rd party apps. Did research and analyzed web-engine recognition patterns for WordPress, Drupal, Joomla, and Magento-based websites. Implemented a WordPress plugin using cryptography-backed techniques to achieve secure and scalable authorization. The integration had a great business impact, allowing Wordapp to massively scale up the business and make more than **€1 Million** in revenue in the first year
- Evaluated **Rust** and **Go**-based technologies to execute time-critical tasks. Developed **Go**-based web scraping and translation tools
- Facilitated in-app self-services to enable users to manage templates, domains, orders, and payment processes. Actively participated in integrating the **Hyperwallet**, **BillPro**, and **PayPal** platforms for wire transfers and credit card processing, including the generation of invoices and receipts
- Integrated the **Google Ads (Adwords)** platform to enable continuous improvement of ad performances with the help of a crowd of writers
- Designed and implemented a quality scoring algorithm for a fair cost distribution between crowd writers and editors based on their contributions
- Proposed the migration of sensitive and transactional data from **MongoDB** into **PostgreSQL**
- Managed AWS EC2 Linux servers, developed shell scripts to automate DB backup operations
- 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 incoming CVs

Software Engineering, B2B Consultancy, Co-founder

Seasonal

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

Technologies: Rust, Go, Java, JavaScript, C#, Ruby, Python, Databases, Microservices, Docker, Git

- Did technical analysis and proposed the system architecture for the **Dokon** (<http://dkn.uz/en/about>), a Dark Store-based delivery service (**Go, Flutter, React**) in Tashkent. Interviewed and built the core team. Consulted the team toward successful project delivery (voluntary, on-demand, infrequent)
- Provided software development services for **Maxim Integrated** (September 2020 - February 2021, for the period during the COVID-19 pandemic when I had to return to my home country, Uzbekistan)
- Provided software development services for **Wordapp** (January 2017 - April 2019)

Technical Lead, Principal Architect

January 2014 - December 2015

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: Qt C++, Java, Spring, Web Services, WebSocket, JPA/Hibernate, PostgreSQL, Oracle, IBM DB2, Big Data, Crystal Reports, Maven, SVN, Tomcat, Redmine, Cryptography, PKI

- Led the development of e-Government-related projects, including:
 - National Document Management System E-IJRO (the first officially certified and recommended DMS in Uzbekistan, serves 5000+ organizations)
 - e-Court systems for Civil (E-SUD) and High Economic Courts of the Republic of Uzbekistan
 - e-Archive system for the Supreme Assembly of Uzbekistan
 - 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)
- Led the development of the **Security Service Provider (SSP)** named **KALKAN**, which enabled seamless integration of Web applications with e-Government services and PKI platform, ensuring secure network communications between clients and back-end services through a crypto tunnel:
 - Qt C++ components for desktop and mobile clients
 - Java-based server-side components and API functions
 - JavaScript-based WebSocket API for authentication, data exchange, digital signature generation/validation, ciphering, and other security-related operations
- Designed and developed a secure, high-speed binary protocol for enabling interactive and real-time text, voice, and video communications, including authentication, heartbeats, and error handling functions; coded Qt C++-based client library and Java-based server components
- Investigated and coded NAT traversal and UDP/TCP hole-punching techniques 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
- Managed day-to-day activities and tracked the progress of software projects
- Developed long and short-term technology strategies, priorities, roadmaps, and milestones; risk analysis and business-focused oversight of R&D activities; Analyzed requirements and prepared software requirement specifications (SRS), ATP, and other documents
- Inspired, motivated, and mentored the team members in various areas of software engineering

Team Leader, Architect (part-time)

October 2013 - June 2014

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 Web-based GPS Tracking System, which provides real-time geo-locations on the map, route tracking, and the management of ZOI (zones of interest) and POI (points of interest). Additionally, the system allows control over various events such as violations on the route, speed limits, and fuel dumping
- Analyzed requirements and prepared system architecture, design, and other documents
- Built the core team and mentored developers on the Java-based development

E-Government, System Architect

December 2006 - February 2014

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

Technologies: Java, Spring, JPA/Hibernate, PostgreSQL, Oracle, Crystal Reports, Jabber/XMPP, PKI

Project #74296: Local Governance Support Project (2011 - 2014)

- Engaged with stakeholders and government authorities to clarify requirements and discuss trade-offs
- Led the development of e-government systems:
 - National Document Management System named **e-Hujjat** (the new version of the DMS based on **SOA** architecture and **Java** platform)
 - Online Education Portal for the Academy of Public Administration of Uzbekistan
- Deployed the **e-Hujjat** system in pilot regions, covering 27 local government authorities
- Established **PKI Certification Authorities** in pilot regions to support e-services nationwide
- 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
- Conducted training sessions in pilot regions to educate government authorities on using the developed systems through the Online Education Portal
- Head-hunted, convinced, and recruited (20+) qualified IT professionals, business analysts, and trainers. Supervised consultants by ensuring their contribution to the project goals, including preparation of TORs, planning, monitoring, and assisting in the preparation and evaluation of reports

Project #50777: Strengthening decision-making processes of the Ministry of Economy (2006 - 2010)

- 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 / Java**)
 - Web portal and Intranet portal (**Liferay / Java**)
- Prepared software requirement specifications, user manuals, and other documents. Made technical analysis and procurement plans for software and hardware components
- Managed the day-to-day implementation of technical development activities; analyzed and solved bottlenecks and other problems to ensure timely delivery of project milestones

Senior Software Engineer, Head of R&D Team

June 2010 - December 2010

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

- Developed a distributed gateway system for building high-speed **SMS** and **USSD** services based on **SS7** over **SIGTRAN**. Designed and coded the server-side (C, Linux) and client-side (Java) components
- Led 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 recognition, and transliteration into Latin characters
- Investigated **SS7 MAP** flow states for single/combined **SRI-SM**, **forward-SM**, network initiated, and push/pull **USSD** services, 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 day-to-day activities of the core team; analyzed and solved technical problems
- Requirements analysis, architecture, system design, and the preparation of software & hardware requirement specifications (SRS), ATP, and other documents

Freelance Developer

June 2006 - December 2006

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

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

Technologies: Assembler, C, C++, JavaScript, MS Access

- Online stock trading software using open-source libraries and IB TWS API
- An embedded application with a touch-screen interface for generating complex signals on the base of an i8253 RTC chip using predefined schedules of frequency sets
- Medical software and other clinical laboratory applications for Arizona State University
- Web-based online product calculator for a US-based wholesale company

Research And Development Engineer

June 2004 - July 2006

Tashkent University of Information Technologies, Tashkent, Uzbekistan**Technologies:** Assembler, C, C++, Databases, DSP, Cryptography, PKI

- Designed and developed mission-critical, cryptography, and security-related software applications, including PKI-based, real-time voice, instant messaging, and document management systems
- Consulted and trained in software development (Assembler, C, C++, Databases), securing computer systems, accident prevention, and protection systems
- Took an active part in developing the concept of a National Information and Telecommunication System of Uzbekistan, including architecture, organizational diagrams, networks, and flow charts

Software Engineer, Head of Technical Department, Co-founder

January 1998 - June 2004

Subhinur Joint-Stock Company, Tashkent, UzbekistanIncorporated from the growth of companies **Haysher Private** (1998) and **Haysher ASL Limited** (2000)**Technologies:** C, C++, JavaScript, VBA, MS SQL Server, MS Access, Visual FoxPro

- Developed various applications related to business, accounting, banking, reporting, and the web
- Consulted in the design, installation, and administration of computer networks

Software Engineer, Head of Computer Centre

March 1994 - December 1997

Transport Enterprise #2515, Tashkent, Uzbekistan**Technologies:** dBase, FoxBase (Karat), FoxPlus, FoxPro, Visual FoxPro

- Designed, developed, and integrated new modules into the enterprise automation system
- Migrated existing dBase applications to FoxPro. Optimized data structures and processing algorithms, that helped to reduce the processing time of transportation waybills from 2 hours to a couple of minutes. Optimized reports that allowed more than 100kg annual economy in printing paper usage.

Computer Engineer (part-time)

May 1993 - March 1994

National Television and Radio Broadcasting Company, Tashkent, Uzbekistan**Technologies:** Assembler, MASM, TASM, C, Turbo C, Turbo Pascal

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

EDUCATION**Tashkent State Technical University**, Uzbekistan. 1990 - 1995

- Degree: **Engineer (Electronics Engineering, specialty 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](#))

Tashkent State Technical University, Uzbekistan. 1995 – 1997

Ph.D. studies and research in "Adaptive Predictive Control Systems"

CERTIFICATIONS

- **MCS** - 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