

VADIM LEBEDEV

R&D Director, Team Leader

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WORK EXPERIENCE

EMBEDDED SOFTWARE ENGINEER

ORA-E-CARS

2024-08 - ...

- Developed a BMS (Battery Mangement System) based on TI BQ76972 monitor, STM32F4xxx CPU using pigweed + FreeRTOS environment.
- Studied ML methods for battery SOC (state of charge) and SOH (state oh health) estimation

SCALEWAY

R&D ENGINEER

2024-03 - 2024-06

- Played a key role in the industrialization of RISC-V cluster board provisioning, ensuring efficient and reliable deployment of hardware resources.
- Identified and resolved security issues in the server infrastructure management system, enhancing the overall security posture of the organization.
- Implemented Transport Layer Security (TLS) in the u-boot bootloader, strengthening the encryption and authentication mechanisms of the system.
- Developed the LLM/RAG tool, enabling the creation of a robust debugging environment for large-scale multi-component applications.

CONSULTANT

FREETEAM

2022-06 - 2024-02

- Led a team of consultants in the successful completion of multiple projects, including the development of a Malware Cleaner and P2A - QEMU/KVM base real-time introspection software.

FOUNDER - SOFTWARE R&D MANAGER

MBDSYS

2003-01 - 2022-06

- Founded and managed MBDSYS, overseeing the development of innovative software solutions and infrastructure for Orange Cyberdefense, the French General Secretariat for Defence and National Security, and other clients.
- Led the development of Malware Cleaner, a multi-engine virus scanner software, and associated server infrastructure, ensuring robust security measures and efficient threat detection.
- Spearheaded the development of Discretio, a secure federated SIP-based VOIP and messaging system, operating on multiple platforms, including Android, iOS, Linux, Windows, and Mac/OSX.
- Successfully completed various IoT projects, utilizing PIC and AVR microcontrollers, RFID, 802.15.4, Bluetooth, and 6lowpan technologies.
- Designed and implemented a connected lab toolset for LOREAL, streamlining laboratory processes and enhancing efficiency.
- Invented and implemented an innovative self-tuning hearing aid, improving the quality of life for individuals with hearing impairments.
- Developed an Evaluation Board + Reference Design for Home Gateway + VOIP analog telephony adapter and an associated SDK based on an ATMEL SIAP processor.
- Demonstrated strong project and team management skills, ensuring the successful completion of projects within budget and timeline constraints.
- Drafted specifications and tender responses, effectively communicating project requirements and capabilities to clients.
- Maintained excellent customer relations, fostering long-term partnerships and repeat business.
- Kept abreast of the latest technologies and industry trends, ensuring continuous technological advancements and innovation.

SOFTWARE TEAM LEADER

APLIO SA, SARCELLES, FR

1997-09 - 2002-12

- Led a software development team, overseeing the design and development of voice-over IP firmware for internet appliances, resulting in improved functionality and performance.
- Designed and developed the server infrastructure for the AplioPhone internet appliance, ensuring seamless connectivity and efficient data transfer.
- Ported the "uCLinux kernel" to M68EN302 and ARM7TDMI processors, expanding the compatibility and versatility of the firmware.
- Designed SIAP, an ARM7TDMI based microcontroller optimized for VOIP applications, improving the efficiency and effectiveness of voice-over IP technology.

ARCHITECTURE MANAGER AND SOFTWARE TEAM LEADER

KORTX INTERNATIONAL, PARIS, FR

1989-01 - 1997-12

- Managed a team of software engineers and architects, overseeing the analysis, design, and development of network and telecom software for multiple platforms (MSDOS, Windows, Mac, and Unix) using C, C++, and assembler languages.
- Implemented object-oriented development methods (Coad/Yoardon, Booch, and Rumbaugh), ensuring efficient and scalable software solutions.
- Led the successful delivery of multiple projects, meeting strict deadlines and exceeding client expectations.

SYSTEMS ENGINEER

COMDA LTD, IL

1987-01 - 1989-12

- Implemented the TCP/IP stack on the 3COM Ethernet card, contributing to the successful integration of networking capabilities.
- Ported the TCP/IP stack to VAX/VMS, enabling seamless communication and networking on the platform.
- Successfully ported the X server to MSDOS, expanding the accessibility and usability of the graphical interface.

SYSTEMS ENGINEER

VEGA TOOLS LTD, IL

1983-01 - 1987-12

- Developed and implemented various communication software, time monitoring systems, and equipment control solutions on IBM/PC, UNIX, VAX/VMS, and Macintosh platforms.
- Designed and developed the PMK (Portable Multitasking Kernel), a groundbreaking software solution that revolutionized multitasking capabilities on multiple platforms.
- Successfully ported Wisdom Prolog from Sun OS to Mac and PC, expanding the reach and accessibility of this powerful programming language.
- Created the UI Prolog library for Macintosh, facilitating the development of user-friendly interfaces.
- Developed an expert system for composing insurance contracts in Prolog, improving the efficiency and accuracy of the composition process.
- Designed and developed an NLP system in Prolog for querying dBASE databases, facilitating data access and analysis.
- Developed a Telex/SMTP gateway on Unix BSD 4.2, enabling seamless communication between different messaging systems.
- Created a PC-based videotext console with remote administration capabilities, providing users with a user-friendly interface and convenient remote management options.
- Developed an IBM/PC BIOS emulator for DEC Rainbow PC, allowing compatibility and interoperability between different hardware platforms.

LEAD SOFTWARE ENGINEER

MEDAMATIC LTD, JERUSALEM, IL

1982-01 - 1983-12

- Led the development of a Smalltalk interpreter, contributing to the advancement of programming languages and enabling more efficient software development.
- Developed a form manager for PC compatible with DEC-FMS, streamlining data entry and improving user experience.
- Conducted systems programming on VAX/VMS, Z80, IBM/PC under MS-DOS, CP/M, MP/M, Turbo-DOS, showcasing versatility and proficiency in multiple operating systems and programming languages.

PART-TIME SYSTEMS ENGINEER

MEDAMATIC LTD, JERUSALEM, IL

1979-01 - 1982-12

- Led the development of contract management software for the insurance industry as a part-time Systems Engineer at Medamatic LTD.

ANALYST PROGRAMMER
MINISTRY OF INDUSTRY COMMERCE AND
TOURISM
1978-01 - 1979-12

- Developed a customized RPG-like language to simplify report generation, improving efficiency and accuracy in data analysis and reporting.
- Led a team of professionals in the selection and implementation of a computer system for the Ministry of Industry Commerce and Tourism, ensuring seamless integration and optimal functionality.
- Managed the development and maintenance of the Management of Industrial Actors database, ensuring data accuracy and accessibility for key stakeholders.



SKILLS

EMBEDDED PLATFORMS

ARM, X86, AVR, ESP32, i.MX6, Rapebrry PI, SIAP, PIC, MC68302,Arduino

IT TECHNOLOGIES

Linux, Windows, Mac/Osx, Networking, Cybersecurity, Embedded Programming, IoT, Electronics, Linux and Windows user and kernel-mode programming, RTOS, Blockchain, Secure communications, WiFi, Bluetooth, Open Source, VOIP, SIP, RTP, SRTP, WebRTC,Redis,Docker,Gitlab,Buildbot, LLM, RAG, ML ChatGPT, Ollama, Mixtral, OpenAI,IoT,Git,Github,Gitlab,Jira

PROJECT MANAGEMENT

Critical Chain Method

PROGRAMMING LANGUAGES:

C++, C, Java, Python,JavaScript, TypeScript, PHP, Pascal, PL / I, BASIC, LISP, PROLOG, COBOL, and FORTRAN,HTML,Solidity



EDUCATION

UNIVERSITY OF JERUSALEM
1977-01

1977-79 - University of Jerusalem, Faculty of Natural Sciences
Specialization in Mathematics, Statistics and Computer Science

BAC
RIGA POLYTECHNIC INSTITUTE
1975-01

1975 - BAC, Riga USSR
1975-76 - Riga Polytechnic Institute, Faculty of Electronics



HOBBIES & INTERESTS

Blockchain Technologies, CryptoCurrency, AI
Ping Pong, Sailboats,General Aviation
Science fiction