Vlad Radu

Senior Software Engineer

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Other Links:

About Me

I am a highly motivated software engineer pursuing a PhD in Computer Science, possessing excellent skills in architectural design and team leadership. My expertise has allowed me to build successful solutions from the ground up.
I thrive in a fast-paced start-up environment where I can work collaboratively with talented individuals, learn new things, and hone my skills.
My passion for blockchain and the web3 ecosystem drives me to engage in diverse projects that challenge and enhance my skills.

Skills

Tech Skills

Python	★★★★★
C	★★★★★
C++	★★★★½
Rust	★★★★½
Go	★★★★½
Java	★★★½
Linux Internals	★★★★★
Compilers	★★★★½
Docker	★★★★½
Kubernetes	★★★★½
GCP	★★★★½
AWS	★★★★½

(*)The skill scale is from 0 (Beginner) to 5 (Expert).

Work Experience

Sep 2021 - Mar 2023

Senior Software Engineer / Tech Lead — XPERI

Member of a start-up team that is currently developing an innovative hybrid connected radio solution. This solution combines linear broadcast with IP-delivered content to provide users with a more enriched and personalized experience.

- Implemented a caching mechanism for deep-link track lookup, which has resulted in a 60% increase in application performance.
- Redesigned a 3rd party solution for artist/news matching, which has led to a 25% performance increase and allowed for greater scalability.
- Designed an architectural model that streamlined data flow and enrichment through several components, resulting in a significant 20% reduction in data processing time.
- Ensured an end-to-end migration to a new proposed scalable architecture for the audio tracks analyzer, which resulted in an 80% performance speedup.
- Led a team of 7-10 software engineers. Translated business requirements into technical solutions.

Tech Stack: Python, Go, Rust, MERN Stack, Redis, GCP, RabbitMQ, Docker, K8s, Helm, Terraform.

Oct 2019 - July 2021

Senior System Engineer / Tech Lead — VARTOS

Part of a start-up team that developed a new robust server-side operating system.

- Implement a light-weight cryptography library that resulted in a 30% optimization of memory usage by redesigning its memory management technique.
- Contributed to the creation of the networking stack and streamlined data processing through it.
- Designed the compiler and standard library for a in-house C-like programming language.
- Designed the API used for creating objects or data structures inside the system.
- Led a team of 3-5 software engineers.

Tech Stack: C, C++, Rust, OpenSSL, Docker, K8s, Kernel Development, Compilers, LLVM.

Jan 2017 - Oct 2019

Software Engineer — Luxoft

Part of a start-up team of brilliant software engineers that developed SuperCloud SDN and NFV Services Orchestration Framework (a virtual networking solution that combines both concepts and technologies such as those used at the core of OpenStack).

- Increased the response time of deployed VMs by 50% by streamlining their distribution through the design and implementation of an orchestrator load balancer.
- Researched, designed, and implemented a solution to add Physical Network Function integration compatibility.
- Integrated Docker, Kubernetes and AWS components with the orchestrator.
- Achieved 100% test coverage by designing a comprehensive testing framework.
- Improved the product's scalability by 25% by resolving issues with messaging and event-based mechanisms.
- Developed SDKs for different orchestration components.

Tech Stack: C/C++, Python, Rust, Go, Docker, K8s, GCP, AWS, OpenStack, Virtualization, RabbitMQ.

Aug 2014 - Aug 2016

Junior Embedded Software Engineer — NXP/Freescale Semiconductor

During my time as a CodeWarrior Software Analysis team member, I played an instrumental role in the development of the hardware tracer and profiler that yielded significant performance enhancements. Notable contributions include:

- Drove an 80% reduction in code correlation time for traced events.
- Achieved a 30% speedup for traced events filtering operation.
- Actively participated in architectural design planning and documentation development.
- Conducted comprehensive performance analyses on specified architectures.

Tech Stack: C/C++, Java, OS Internals, RPC, ARM Instruction Set, Embedded Systems.

Jun 2013 - Aug 2013

Software Engineer Intern — Intel Corporation

Worked with a beta version of the Intel Perceptual Computing SDK and RealSense Camera to develop new features and improve user interaction with the Windows 8 user interface. Specifically, I leveraged the SDK to enhance the user experience and create seamless integration between the camera and Windows 8 UI.

Blockchain Skills

Geth	★★★★☆
Vyper	★★★☆☆
Move	★★★☆☆
Rell	★★★★★
WASM	★★★★☆
Solidity	★★★★½
Smart Contracts	★★★★☆
ZK Proof	★★★★☆
ETH VM	★★★☆☆
Unity	★★★☆☆

(*)The skill scale is from 0 (Beginner) to 5 (Expert).

Blockchain/Web3 Experience

Apr 2023 - Oct 2023

Project Owner / Tech Lead — Chromaway

Played a pivotal role in both the initiation and advancement of this project, where my responsibilities encompassed forming the team and meticulously surmounting every hurdle to propel the project's progress.

- Designed and implemented the DApp's blockchain backend and UI.
- Led the development of the application, prioritizing a smooth and intuitive UX.
- Creating a modular design that allows all components to be easily integrated and utilized.
- Exploring and creating POC to assess the interoperability between RBN and other chains.

Tech Stack: Rell, MERN Stack, Rust, NFT, ZK Proof, EVM, RBN, Vercel, Compiler, Docker, AWS, Cryptography.

Dec 2022 - July 2023

Senior Blockchain Engineer — Ethernity Cloud

Joined Ethernity Cloud project as a Senior Blockchain Developer, assuming responsibility for the majority of the project's blockchain components.

- Designed and added new features, optimizing platform performance.
- Implemented secure enclaves ensuring a complete secure task running flow.
- Smart contracts development.

Tech Stack: Python, Rust, Solidity, MERN Stack, Intel SGX, Docker, AWS.

Nov 2022 - Jul 2022

Senior Blockchain Engineer / Tech Lead — Antler Interactive

Member of a startup engineering team focused on creating a new NFT blockchain game.

- Led the conceptualization of innovative blockchain models and game features.
- Revamped the Admin UI panel to optimize user experience.
- Research possibility of integrate blockchain bridges to enhance the game's capabilities.
- Orchestrated seamless integration between Unity and blockchain code, ensuring the game's scalability, speed, and reliability.
- Successfully established the deployment infrastructure, streamlining the launch process for efficient and smooth game deployment.

Tech Stack: Rell, MERN Stack, Rust, NFT, Solidity, Vercel, RBN, Unity, Docker, AWS.

Aug 2022 - Nov 2022

Senior Blockchain Engineer — Human

Member of a dynamic startup engineering team focused on developing an innovative proof of identity solution, I actively contributed to several mission-critical aspects.

- Designed and implemented DApp backend, enabling the team to build a scalable and reliable application.
- Integrated ETH Semaphores into the system to enhance privacy and private transactions.
- Created and integrated smart contracts with zero knowledge snarks to ensure the system's security and privacy-preserving.
- Effectively integrated zero-proof private transactions into the smart contract, further enhancing the system's privacy features.

Tech Stack: Go, Geth, Solidity, ZK Proof, ZK Snarks/Starks, Circuits, Halo, Halo2, ETH VM, ETH Semaphores, Smart Contracts.

Feb 2022 - Aug 2022

Blockchain Protocol Engineer — Elrond/MultiverseX

Proud member of a talented team of engineers tasked with developing a cutting-edge L1 blockchain protocol. Involved in creating a robust ecosystem of tools and resources to support the platform, all while adhering to the highest standards of innovation and quality.

- Leveraged expertise to enrich the Elrond protocol layer with new features, ensuring seamless functionality and scalability.
- Spearheaded backend enhancements for the Maiar Exchange DEX.
- Integrate zero-proof private transactions into smart contract.

Tech Stack: Rust, WASM, Go, Solidity, Elrond VM, ZK Proof, KZG Commitments, Smart Contracts.

Jul 2017 - Present

Research — Freelance

Continuously staying at the forefront of blockchain technology, I engage in ongoing research and actively delve into various ecosystems and SDKs to refine my skills. Notably, I have gained valuable experience working with a diverse set of SDKs, including Cosmos, Solana, Chromia, Avalanche, Near, and Elrond. This hands-on approach has enriched my understanding and expertise in different blockchains, empowering me to contribute effectively to various projects.

Jan 2017 - Jul 2017

M.Sc Student — University Politehnica

Developed a test blockchain that effectively showcased the key concepts outlined in the paper: "Majority is not enough. Bitcoin Mining is Vulnerable". This blockchain served as a concrete demonstration of the ideas presented in the paper and helped to illustrate them in action.

Soft Skills

Creativity	★★★★★
Critical Thinking	★★★★★
Problem Solving	★★★★☆
Teamwork	★★★★☆

(*)The skill scale is from 0 (Beginner) to 5 (Expert).

Education

2018 - Present

Ph.D, Energy Harvesting in Wireless Sensor Networks

University Politehnica

On going research in this domain focusing on finding improvements.

2017 - Present

Graduate Teaching Assistant-Numeric Computers

University Politehnica

Teaching students on the implementation of various hardware designs using FPGAs. Provide them with valuable insights into computer architecture and CPU design trade-offs. This allows them to make informed decisions when selecting the appropriate hardware for a particular task and to develop efficient and effective solutions.

2016 - 2018

M.Sc, Advanced Software Systems

University Politehnica

Acquired knowledge: Cloud Computing, Cryptography, Blockchain, Machine Learning, Data Mining & Warehousing, Android

Thesis - Smart City. Smart Parking.

Significantly decreased the time required to locate an available parking spot by up to 70%. To accomplish this, I designed and implemented the architecture for a cloud-based Smart Parking application utilizing AWS and the MERN stack. This resulted in a more efficient and streamlined parking experience for users.

2012 - 2016

B.Sc, Computer Science and Engineering

University Politehnica

Acquired knowledge: Algorithms Design & Analysis, Embedded Systems Design, Compilers, Operating Systems, Kernel Development, Parallel & Distribute Algorithms, Artificial Intelligence.

Thesis - Logical Navigation in Really Big Data Traces.

Achieved code correlation time of 2s, tested on Linux Kernel traced events (300+ GB of data). Increased the speed of filtering operation over traced events by 30%.