Radu Marias

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SUMMARY

I am a Rust Developer with extensive experience in concurrency, file systems, networking, distributed systems, containers, APIs, and cryptography. I also have a strong background in Java, focusing on network protocols such as QUIC, TCP/IP, UDP, SSH, and FTP, and I'm proficient in SQL databases, including PostgreSQL and MySQL.

In Romania's top 10 most active GitHub users and 1st on Rust.

I currently lead an open-source project that creates an encrypted filesystem. This project enables users to set up encrypted directories to sync with various cloud providers. Check it out here: https://github.com/xoriors/rencfs

Collaborated on projects involving cryptography, digital identity, encoders, APIs, scaling, 3D rendering, WASM, egui.

Experience with Solana with Anchor in some personal learning and experimental projects.

Previously, I developed web applications using GWT and backend technologies like Quarkus, ActiveMQ, Elasticsearch, and Apache Camel. I've also developed Android apps that synchronize data with servers via REST APIs.
I built SSH and FTP clients in Java and contributed to a metrics collector for the TCP/IP stack implementation in C/C++ for mobile devices at Danger Inc., which is like the grandfather of Android; I was part of the core team.
I also created a proof of concept for remote device interaction, allowing users to capture mobile screens and send keyboard inputs through a web app similar to a mini-VNC.

Skills:
- Rust
- Java
- Kotlin
- Python
- Networking Protocols (QUIC, TCP/IP, UDP, SSH, FTP)
- SQL (PostgreSQL, MySQL)
- Web Applications (GWT)
- Backend Technologies (Quarkus, ActiveMQ, Elasticsearch, Apache Camel)
- Android Development
- Encryption and Security
- Distributed Systems
- Containerization
- Solana

Feel free to reach out via email at radumarias@gmail.com or see my portfolio and other contact info at https://xorio.rs

EXPERIENCE

xorio, **Senior Rust Developer**
Mar 2023 - Present
Collaborated on projects involving cryptography, digital identity, encoders, APIs, ML scaling, 3D rendering, WASM, egui.

Few open-source projects to boost my learning experience and passion for Rust.

rencfs
- An encrypted file system that mounts with FUSE on Linux. It can be used to create encrypted directories.
You can then safely backup the encrypted directory on an untrusted server without worrying about the data being exposed.
GitHub: https://github.com/radumarias/rencfs
Website: https://radumarias.github.io/rencfs

Basic experience with Solana on-chain apps and dApps.

rfs
- Distributed filesystem written in Rust. The intention is to be a learning and experimental project for the concepts involved in building such a system.

GitHub: https://github.com/radumarias/rfs

SyncOxiders
- Cloud file and email Sync, file Sharing, Backup and encrypted solution written in Rust.
GitHub: https://github.com/radumarias/syncoxiders
WebsIte: https://syncoxide.rs

CipherShell
- This is in very early stages, much more is to be implemented. Currently is working only on Linux, with plans to support macOS and Windows, Android and iOS in the future.
GitHub: https://github.com/radumarias/ciphershell-egui
Website: https://ciphershell.com/

rencfs daemon
- It uses rencfs and can be installed as systemd service and configure via YAML files.
GitHub: https://github.com/radumarias/rencfs-daemon

REncrypt
- A Python encryption library implemented in Rust. It supports AEAD with AES-GCM and ChaCha20Poly1305. It uses ring to handle encryption.
GitHub: https://github.com/radumarias/rencrypt-python
PyPI: https://pypi.org/project/rencrypt

zeroize
- Securely clear secrets from memory
GitHub: https://github.com/radumarias/zeroize-python
PyPI: https://pypi.org/project/zeroize

aws-lambda-axum-dynamodb-template
- Template app with Aws Lambda, axum, DynamoDB, API Gateway and CloudWatch. It also has a branch for shuttle.
GitHub: https://github.com/radumarias/aws-lambda-axum-dynamodb-template

xorio, **Solana Rust Developer**
Oct 2024 - Nov 2024
Experimented with Solana and Anchor for becoming familiar with the technology.

My idea was to build an executor service which would run your jobs represented as a YAML file on the Solana blockchain as Programs (smart contracts).

This turned out to be quite impossible to achieve given the limitations of Solana Programs like 32 KB of stack memory, 400ms run time, no direct access to outside world (off-chain), cannot execute non-deterministic computations (e.g., random number generation), cannot perform floating-point operations (BPF supports only integer math).
These are reasonable limitations given the real use cases of these Programs and even though I wasn't able to implement my idea, this endeavor helped me to better understand the technology and how to develop such Programs and about on-chain and off-chain dApps which I documented in the attached link.

AppScenic, **Software Architect | Rust, Distributed Systems, Microservices, Cloud Solutions**
Mar 2022 - Feb 2023
Designed and created services to synchronize between online stores and like Shopify, WooCommerce, eBay for a dropshipping solution. It uses AWS services like SQS, ECS, ECR, RDS and mainly built in Quarkus.

REDCap Cloud, **Software Architect | Project Lead | Java, Python, PostgreSQL, Android Studio**
Jan 2019 - Mar 2022
Roles and Responsibilities
● Architected solutions for existing and new modules, ensuring scalable and efficient designs.
● Developed prototypes for various modules and features to validate concepts.
● Led implementation and development efforts, taking an active role in coding.
● Served as the tech lead for both back-end and Android teams, guiding technical direction.
● Collaborated with the DevSecOps team to enhance services architecture and streamline CI/CD processes while working closely with the QA team to improve automation.
● Managed the interview process for new developers and QA automation members, facilitating onboarding and ramp-up.
● Interacted with clients to gather requirements and specifications for new features while mitigating and resolving production issues.

Key Areas of Expertise
- Back-end Development: Java, microservices, and clustered services; REST API design and implementation.
- Front-end Development: GWT and Android applications.
- Application Development:
  ○ Designed and implemented an application to consume large CSV files from SFTP, utilizing multiple microservices; deployed on OpenShift.
  ○ Created a gateway proxy application for horizontal scaling, exposing OpenAPI REST APIs for internal and external applications; deployed on OpenShift.
- Cloud and Container Integration
- Adoption of Best Practices: Implemented concepts from The Twelve-Factor App to enhance application development.
- Observability and Monitoring: Integrated ELK stack for observability, utilizing APM for proactive production issue prevention and log-based alerting.

Technologies
- Programming Languages: Quarkus (Java and Kotlin), Java 8 & 11, J2EE, JPA, Hibernate, MicroProfile
- Search and Analytics: Elasticsearch for contextual searching and reporting.
- Authentication Protocols: SSO, SAML, OpenID Connect, JWT.
- Containerization and Orchestration: Docker, Kubernetes, AWS Serverless, RDS.
- CI/CD Tools: GitHub Actions, Jenkins, Ansible.

REDCap Cloud, **Principal Software Engineer**
Sep 2016 - Jan 2019
Roles and Responsibilities
- Architected solutions for existing and new modules, ensuring scalable and efficient designs.
- Developed prototypes for various modules and features to validate concepts.
- Led implementation and development efforts, taking an active role in coding.
- Collaborated with the DevSecOps team to enhance services architecture and streamline CI/CD processes while working closely with the QA team to improve automation.

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Technologies
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- Authentication Protocols: SSO, SAML, OpenID Connect, JWT.
- CI/CD Tools: Jenkins, Ansible.

Candor GRC, **Principal Software Engineer | Java, PostgreSQL, MongoDB, Android Studio**
Sep 2011 - Aug 2016
Developed various GWT applications, implementing both client and server-side components using Jetty, Guice, JPA, Shiro, and PostgreSQL. Exposed services through RESTful APIs to enhance integration and accessibility.

- Served as the lead developer on applications utilizing Elasticsearch, GWT, ActiveMQ, Camel, and email/SMS clients, driving innovative solutions and improving system performance.
- Led development efforts for Android applications, overseeing project execution and ensuring high-quality deliverables.
- Conducted analysis of big data technologies within the Hadoop ecosystem, evaluating tools such as Spark, HBase, Apache Phoenix, CitusDB, Greenplum, Trafodion, Cassandra, MongoDB, and Kylin to identify suitable solutions for data management and analytics.

Cognizant Softvision, **Senior Software Developer | Java, Android, API Development, Microservices**
May 2007 - Aug 2011
Developer for Danger Inc, the grandfather of Android OS.

Contributed to the development of Java applications, including FTP and SSH clients, as well as social media clients for Twitter and Facebook. Worked on core classes related to network communication and optimized performance by fixing crashes in C and ARM layers.

Addressed issues within the radio module by identifying and resolving various bugs to enhance device functionality.

Led the migration of device architecture from cloud-based internet access to standalone internet access. This involved transitioning from a proxy server for browsing, email, and chat services to direct content handling on the device. Developed new email, browser, and chat applications while adapting the network layer to eliminate reliance on a relay server.

Served as the lead developer for various Android applications, overseeing development efforts and ensuring high-quality deliverables.

SoftZone, **Senior Software Developer**

Feb 2005 - May 2007
- Lead developer for various Java stand-alone apps and web apps in Tapestry and J2EE
- Developed software for electric grid schema editor from CAD files. Using neural networks to identity in a schema various entities based on entities legend and save connections between them. Each entity can then be assigned to the real electric equipment in the field
- Developing apps in .NET 1.1 and 2.0

OfficeINN SRL, **Web Developer**

Oct 2004 - Feb 2005
- Developing web pages in PHP, HTML, Javascript, CSS
- Customizing Zen Cart to add various modules
- Support for web hosting

EDUCATION

Babes-Bolyai University
Master's Degree • **Object Oriented Programming** • *2006 - 2007*

Universitatea de Nord din Baia-Mare
Bachelor's degree • **Computer Programming** • *2002 - 2006*

SKILLS

solana • Blockchain • Smart Contracts • Distributed Systems • Distributed File Systems • cryptography • filesystem • Public Key Cryptography • Encryption • ISO Standards

HONORS & AWARDS

JPaint: Best project of the year

North University of Baia Mare, Romania • *May 2005*
We implemented a solution that let's you import CAD files and edit them. After that you could define a small legend of shapes as electrical entities and perform a recognition with neural networks for an electrical schema, recognizing entities and relations between them, electrical connections. You could then edit the recognized model and also export it to several formats.