

Radu Marias

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Summary

Passionate Rust Developer with robust experience in concurrency, filesystems, networking, APIs and some cryptography.

Also Java developer with experience in network protocols like SSH, FTP. Experience with SQL servers like PostgreSQL, MySQL.

Worked on webapps in GWT with various backend technologies like Quarkus, ActiveMQ, Elasticsearch, Apache Camel.

Also developed various Android apps mostly to sync data with server, bidisync using REST API.

Specialties: J2SE, J2EE, Quarkus, network communication protocols, GWT, distributed systems, Elasticsearch.

Currently I'm working on an open source project, encryption filesystem that is mounted on Linux with FUSE. It can be used to create encrypted directories which you can sync with any Cloud provider among your devices.

You can see here more about the project <https://github.com/radumarias/rencfs>

You can also see on my GitHub some other projects I'm involved in.

My vast experience in Java and recently in Rust is helpful for coming up to pace in various situations. I built apps like SSH and FTP clients in Java and was involved in a metrics collector for TCP/IP stack implementation in C/C++ for a mobile device working for Danger Inc. Also created a proof of concept that captures screen of the mobile device and expose it via an applet in a webapp and sends keyboard inputs so you could interact with the device remotely. Something like a mini-VNC.

I'm very passionate, hard working and a good problem solver.

Experience

Senior Software Developer

Freelance

Mar 2023 - Present (1 year 5 months)

Working on a few open source projects to boost my learning experience and passion about Rust.

- SyncOxidizers

Cloud files Sync, Sharing, Backup and encrypted solution written in Rust.

GitHub: <https://github.com/radumarias/syncoxiders>

Site: <https://syncoxide.rs>

- 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 folder on an untrusted server without worrying about the data being exposed.

GitHub: <https://github.com/radumarias/rencfs>

- RencFs GUI

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/rencfs_desktop

- 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.

It offers slightly higher speed compared to other Python libs, especially for small chunks of data. The API also tries to be easy to use but it's more optimized for speed than usability.

GitHub: <https://github.com/radumarias/rencrypt-python>

- zeroize

Securely clear secrets from memory. Built on stable Rust primitives which guarantee memory is zeroed using an operation will not be 'optimized away' by the compiler.

GitHub: <https://github.com/radumarias/zeroize-python>

- gdrive-rs

A Google Drive client in Rust using fuse3

Plans are to create also a Proton Drive implementation.

GitHub: <https://github.com/radumarias/gdrive-rs>

- A very basic implementation of an in-mem filesystem in Rust exposed with FUSE on Linux.

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



Software Architect

AppScenic

Mar 2022 - Feb 2023 (1 year)



Software Architect Project Lead

REDCap Cloud

Jan 2019 - Mar 2022 (3 years 3 months)

Roles:

- Creating architecture for existing modules and new ones
- Creating prototypes for various modules and features
- Responsible of implementation and development, highly involved in coding
- Tech lead for back-end and Android teams
- Collaborating with DevSecOps team for services architecture, CI/CD and with QA team for automation
- Managing interviews for new developers and QA automation members, ramp-up new developers

- Interacting with clients for requirements, specs for new features and mitigating and resolving production issues

Areas:

- Back-end Java and microservices and clustered services, REST API
- Front-end GWT, Android
- Implemented from scratch an app designed to consume large CVS files from SFTP with multiple consumers as microservices. Deployed to OpenShift.
- Implemented from scratch a gateway proxy like app with horizontal scaling to expose OpenAPI REST API over other internal and external apps with REST API. Deployed to OpenShift
- Integrations with AWS, Kubernetes, Jenkins, Ansible
- Implemented concepts of The twelve-factor app <https://12factor.net>
- Helped integrating ELK for Observability, extensively using APM to prevent and debug production issues, also alerting from logs

Technologies:

- Quarkus (Java and Kotlin), Java 8 & 11, J2EE, JPA, Hibernate, MicroProfile
- Elasticsearch (for context searching and reporting inside our app)
- SSO, SAML, OpenID Connect, JWT
- Docker, Kubernetes, AWS Serverless, RDS
- GitHub actions, Jenkins, Ansible



Principal Software Engineer

REDCap Cloud

Sep 2016 - Jan 2019 (2 years 5 months)



Senior Software Developer

Candor GRC

Sep 2011 - Aug 2016 (5 years)

- Developing various GWT apps, client and server side in Jetty using Guice, JPA and Shiro, PostgreSQL. Also exposed services with REST
- Lead developer on apps using Elasticsearch, GWT, ActiveMQ, Camel, email/sms clients
- Lead developer for Android apps
- Analyzed Big data technologies and also from the Hadoop ecosystem like Spark, HBase, Apache Phoenix, CitusDB, Greenplum, Trafodion, Cassandra, MongoDB, Kylin



Developer

Cognizant Softvision

May 2007 - Aug 2011 (4 years 4 months)

- Developer for Danger Inc, somehow the originator of Android OS
- Developed Java apps like FTP client, SSH client, Twitter, Facebook clients, worked on core classes related to network communication, worked on optimizing and fixing crashes in C and ARM layers
- Worked a bit on the radio module fixing various bugs
- Lead developer on migrating the device from cloud based internet access to stand alone device internet access. The device architecture was that it uses a proxy in cloud for browsing, email, chats. At some point the Danger servers were closed and we needed to migrate the OS to be able to handle

internet content directly from the device. For that we crated various email, browser and chat apps and also adapted the network layer not to use a relay server

- Lead developer for various Android apps



Senior Software Developer

SoftZone

Feb 2005 - May 2007 (2 years 4 months)

- 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



Web Developer

OfficeINN SRL

Oct 2004 - Feb 2005 (5 months)

- 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

Master of Computer Applications (MCA), Computer Programming

2002 - 2006

Skills

Python (Programming Language) • Cryptography • gRPC • SQLite • fuse • Rust (Programming Language) • MySQL • Java • OOP • Java Enterprise Edition

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.