

# Grigore Ciobanu

Software Engineer

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## PROFESSIONAL SUMMARY

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Software engineer with 8+ years of experience building backend systems, microservices, and distributed architectures. Strong expertise in Java (Spring Boot), REST/SOAP API design, relational databases (Oracle, PostgreSQL), and cloud-based deployments on AWS. Proven track record delivering high-throughput financial, telecom, and IoT platforms with a focus on reliability, security, and maintainability. Experienced in eGov platform integrations (MConnect, MSign), Docker, Kubernetes, CI/CD pipelines, and cross-team collaboration from requirements to production.

## TECHNICAL SKILLS

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**Languages:** Java (8/11/17), C/C++ (C99, C++14/17), JavaScript, TypeScript, SQL, PL/SQL, Bash/Shell

**Frameworks:** Spring Boot, Spring (Core, MVC, Security, Batch), Angular, Node.js, JUnit, Mockito, Google Test

**Databases:** PostgreSQL, Oracle SQL/PL/SQL, MariaDB, MongoDB

**Cloud & DevOps:** AWS, Docker, Kubernetes, Helm, Jenkins, GitLab CI, GitHub Actions, CI/CD Pipelines

**Protocols & Integration:** REST, SOAP, MQTT, Apache Kafka, COBOL interfaces, JWT/OAuth2, TLS/HTTPS

**Tools & Practices:** Git, Jira, Confluence, Agile/Scrum, V-Model, Code Review, MISRA-C

## WORK EXPERIENCE

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### Software Engineer | *TAN SRL*

Chisinau, Moldova | Mar 2023 – Present

- Architected and delivered multiple Spring Boot backend services on AWS, supporting mobile apps, embedded devices, and web platforms serving thousands of daily API requests across client environments.
- Designed and implemented RESTful APIs for device telemetry ingestion, remote configuration, user management, and firmware update orchestration, reducing manual device management effort by over 60%.
- Integrated with Moldova's national MConnect interoperability platform to enable real-time data exchange between client applications and government information systems, implementing secure SOAP/REST service consumers and ensuring compliance with eGov data exchange regulations (Law No. 142/2018).
- Implemented MSign electronic signature service integration, building a SOAP client with mutual TLS authentication and PKI certificate-based security to enable legally binding digital document signing, multi-file batch signing, and signature verification workflows for government and enterprise applications.
- Led a full Oracle Database 11 migration to a modern version, including schema refactoring, data migration, and Oracle APEX upgrade—completed with zero data loss and minimal downtime.
- Built authentication and authorization layers using JWT and OAuth2 with role-based access control (RBAC), securing all API endpoints and device-to-cloud communication channels.
- Engineered PostgreSQL and Oracle SQL database schemas to manage firmware versions, device states, telemetry streams, and update histories; optimized queries and indexing to support real-time monitoring under high-volume loads.
- Designed end-to-end OTA/FOTA update workflows (download, validation, installation, rollback) with dual-bank firmware mechanisms, achieving 99.9% update success rate across distributed embedded fleets.
- Implemented MQTT-based communication layers for secure, bidirectional data exchange between cloud services and IoT device networks.
- Containerized backend services, MQTT brokers, and OTA servers using Docker; deployed and managed services in Kubernetes with health checks, resource limits, and auto-scaling configurations.
- Integrated Jenkins CI/CD pipelines automating build, test, container image generation, and deployment workflows, cutting release cycle time by 40%.
- Drove architecture and security design discussions, establishing patterns for API validation, access control, modular service boundaries, and long-term maintainability.

## Software Engineer | [Luxoft \(Vodafone\)](#)

Remote | Aug 2022 – Mar 2023

- Developed and maintained high-throughput C/C++ batch services on CentOS, processing large-scale telecom operations including payments, service activations, and notification workflows for Vodafone.
- Designed containerized service architectures with Docker, configuring images, shared volumes, and environment dependencies for consistent execution across development and production clusters.
- Deployed and managed microservices within Kubernetes clusters, tuning resource limits, health probes, log routing, and horizontal scaling for operational stability.
- Optimized CI/CD pipelines in collaboration with DevOps teams, reducing container build times by 30% and improving deployment reliability across staging and production.
- Automated integration and regression test suites using Python, Shell, and KornShell scripts, increasing test coverage by 25% and eliminating hours of manual testing per release.
- Analyzed functional and technical requirements with Vodafone product teams, translating business specifications into scalable, maintainable backend solutions.

## Software Engineer | [Continental Automotive](#)

Iasi, Romania | Aug 2021 – Jun 2022

- Led a team of 5+ engineers developing BMW Gen5 automotive software, coordinating delivery milestones, mentoring junior developers, and enforcing embedded engineering best practices.
- Designed and implemented AUTOSAR Custom Device Drivers (CDD) at the application layer, ensuring reliable interaction with BSW modules and hardware abstraction layers in safety-critical ECU software.
- Performed system-level integration and validation using CANoe, CANalyzer, and EB Tresos Studio, resolving cross-domain issues across ECUs communicating over CAN and LIN networks.
- Enforced MISRA-C compliance through systematic code reviews, raising code quality and adherence to Continental's automotive development standards.
- Mentored new hires and led Continental's Summer Practice program, guiding student projects in embedded C and automotive communication protocols.

## Full Stack Software Developer | [UniCredit Services S.C.p.A.](#)

Iasi, Romania | Jul 2020 – Jul 2021

- Designed and built Java Spring Boot microservices from scratch using Batch Processing Architecture to handle high-volume financial transactions, reconciliation flows, and scheduled banking operations.
- Integrated modern microservices with legacy banking systems through SOAP and COBOL-based interfaces, ensuring secure, compliant data exchange across heterogeneous financial platforms.
- Designed and optimized Oracle Database schemas, wrote complex SQL/PL/SQL queries, and managed transactional consistency for high-throughput financial workloads.
- Implemented production-grade REST APIs with validation, exception handling, and security controls, meeting internal banking standards and regulatory compliance requirements.
- Built comprehensive automated test suites using JUnit and Mockito, ensuring code quality, functional correctness, and regression safety across distributed services.
- Developed frontend features in Angular (TypeScript), implementing business flows, API integration, and secure session handling for internal banking applications.
- Collaborated with architects and business analysts to translate functional specifications into scalable microservice-based solutions; supported CI/CD pipelines and production releases.

## Junior Software Developer | [Continental Automotive](#)

Iasi, Romania | Jan 2018 – Jun 2020

- Developed and integrated a C/C++ speech recognition engine with the HMI layer, enabling real-time voice command execution in a production embedded Linux infotainment system.
- Implemented application-layer C++ modules for a Linux-based telematics unit (Daimler), including Autonomous Valet Parking, CarSharing, and RemoteTemperatureAssistant features.
- Debugged and resolved runtime integration issues using GDB and log analysis, fixing memory and concurrency defects to improve system stability in production software.
- Wrote automated unit tests with Google Test, ensuring reliability, regression safety, and compliance with C++14 development standards.

- Collaborated with system, middleware, and integration teams to deliver stable cross-layer operation within complex automotive architectures.

## EDUCATION

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### **Bachelor of Science in IT**

Faculty of Computer Science, Iasi, Romania – July 2021

## COURSES

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**Apache Kafka** – Udemy, Dec 2025

**AOSP (Android Open Source Project)** – Udemy, Dec 2025

## LANGUAGES

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**English** (C1 – Advanced) · **Romanian** (Native) · **Russian** (B1 – Intermediate)