

POPOVICI Gabriel Sorin
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PROFESSIONAL OVERVIEW: More than 15 years as a professional software engineer using Java ecosystem, C/C++, and JavaScript, SQL in internet domain & hosting services, finance, banking, civil aviation and transportation industry, oil and gas industry, medical industry, on-line e-commerce retail industry, public and governance sector.

INDUSTRIES: internet domains and hosting, e-trading platforms for banking/finance industry, logistic hubs, airline booking engines, data processing using distributed computing, border management systems, passport issuing systems, vehicle registration systems, information portals, web e-commerce systems, e-banking, middleware inter-process communications artifacts.

EDUCATION

Diploma Engineer, University „POLITEHNICA” of Bucharest, Faculty of Automatic Control and Computers, 2001-2006, Bucharest, Romania.

HONORS

“Leonardo da Vinci” Mobility Programme RO/2006/PL97046/S “Modern techniques for automatic identification”, Department of Computer Science, University of Turin, Italy, April-June 2007

IT CERTIFICATIONS

Certified Professional for Software Architecture Foundation Level, 2025
Sun Certified Business Component Developer Java EE Platform 5, CX 310-091, 2010
Sun Certified Developer for Java Web Services, CX – 310-220, 2008
Sun Certified Web Component Developer for the Java Platform, Enterprise Edition 5, 2008
Sun Certified Programmer for the Java Platform, Standard Edition 6.0, CX-310-065, 2008

IT TRAININGS

Architecting on AWS, Global Knowledge 4502, November 2017, Glasgow UK
Developing on AWS, Global Knowledge 4504, November 2017, Glasgow UK
Creating Distributed Applications Using Pig and Hive on Hadoop, ROITraining 435, November 2017, Glasgow UK

EXPERIENCE

Application Architect/Senior Engineer **March 2019 - present**
Employer: 1&1 Internet Development Romania, 246C Calea Floreasca, 16th Floor, District 1, Bucuresti 014476, Romania

Role: Application Architect Mail&Media **July 2023 - present**
Responsibilities: participate in all phases of the SDLC according to Agile methodologies covering all aspects of the engineering cycle and support for the Mail Domain Hosting product
Project and tasks:

AI-Powered user review analysis - Developed sentiment and category classification using LLMs (Qwen/Llama/GPT) to analyze iOS/Play Store feedback from AppBot for business intelligence PowerBI. Built with Python, Poetry, and LangChain.

AI-Powered microsite generator - Built a spring boot microservice leveraging Ollama's Qwen vision model to automatically transform business images into responsive, single-page websites. Engineered for small businesses and freelancers using Java 21 and Spring AI.

Mail Domain Hosting *modernisation: Light Control Panel* - mobile friendly version for "Control Panel" built in react 19.x (router, i18next, vite, react testing library, hooks) with TypeScript, Tailwind CSS, Sentry 10.x, OAuth2

Mail Domain Hosting *modernisation*: design a new top-down target architecture approach around Microservices inline with business needs, 1&1 Mail&Media infrastructure trends(Autodevops, eventbus, k8s, BOM), Spring Boot(internal Spring Boot), Kafka, Istio (AuthN-AuthZ part of the Auth2020), db-scheduler(task-scheduler), ARC42/ ADRs/TCs for each specific application:

- *Mail service application*: management of email aliases, distribution lists, account email defaults
- *Event Handler application*: management of user profile updates
- *Onboarding service application*: step-by-step onboarding process for converting free users to paid subscribers through strategic onboarding incentives and engagement workflows
- *SSL service application*: management of domain certificates
- *Domain service application*: management of InternetX, IONOS internet domains
- *Light control panel resource*: aggregated view for light control panel (mobile version)

NIS2 Event Handler application: propagate user profile updates about domain owner to InternetX, IONOS registrars as per NIS2 directive for domain details

Technologies: Java 21, Spring Boot 3.x, Kafka, mTLS using Istio, InternetX API, IONOS Domains API

Mail service application: API functionality for email aliases, distribution lists and client validation rules for confirmation emails

Technologies: Java 21, Spring Boot 3.x, Redis, Artemis, Spring Modulith, Quartz, Mapstruct, Docker Compose, Liquibase, Spring Security, mTLS using Service mesh Istio, MariaDB, App-Map/PlantUML

Role: Senior Engineer

March 2019 – July 2023

Responsibilities: participate in all phases of the SDLC according to Agile methodologies covering all aspects of the engineering cycle and support for the Domains, Webhosting products of IONOS and other tenants within the group

Project and tasks:

Domains expiry pool: upload large sets of ICANN TLDs files to Redis using Apache Spark and integrate it with Domains recommendation application

Technologies: Java 11, Gradle, Apache Spark 3.x, ICANN Centralized Zone Data Service API, Spring Boot, Spring Data Redis, OpenCSV, S3 Min.io, Redis, OpenShift Cloud, Helm

WHPSS (WebHosting Product Services Systems): design and implement and OAS public API for end customers to manager their web spaces, web sites(WordPress, Drupal, Joomla), databases, domain bindings, projects and integrate it with customer control panel

Technologies: Java 11, Maven, Spring Boot, Webflux, Spring Data JPA, PostgreSQL, Redis, OpenShift Cloud, Helm, Kafka , Docker, Harbor, Quartz, Cucumber

Cloud migration project - migrated Domains platform applications using Jenkins pipelines, OpenShift templates, Docker, re-route logs to ELK stack using Filebeat; migrated to a cloud

based monitoring platform using Prometheus to centralize and store metrics, Grafana to produce dashboards and Icinga to trigger alerts

Domain Customer API - design and implement an OpenAPI Specification(OAS) public API for end customers and tenants to manage their domains, contacts, requests, name servers, domain statuses, DNS security, privacy, authorization codes, transfer actions, email verifications, data quality, top-level domain features and integrate with Keystone identity service for authentication and authorization

Technologies: Swagger 3.0, Java 11, Spring Boot, Spring WebFlux, Spring Cloud Config, Spring Data, Spring Boot Admin, Lombok, Spring Kafka, Spring R2DBC with PostgreSQL, Spring Data Couch-base, Reactor Extra, Couchbase Enterprise 6.5, Liquibase, Bean Validation API 2.0, Junit5

Domain Customer Interaction System API design and implement an OpenAPI Specification(OAS) contract with the Control Panel and the Domain Provisioning Service System (PSS) allowing single/bulk operations on domains: listing, subdomains aggregations, contacts, names servers, domains statues, auto renewal, release, DNS security, privacy, lock, validation, transfers, ownership, email verification

Technologies: Swagger 3.0, Java 11, Spring Boot, Spring WebFlux, Reactor Extra, Spring Cloud Config, Spring Data, Spring Boot Admin, Lombok, Spring Data Mongo, MongoDB Community Edition 4.x, Bean Validation API 2.0, Junit5, Camunda BPMN

PoC migrate legacy J2EE BPMN workflow engine to cloud native BPMN solutions based on Activity/Camunda (exposed manifest OpenShift deployment descriptor files to open source Activiti community <https://github.com/popovici-gabriel/activiti7-openshift/tree/master/setup>)

Senior Developer

May 2018 - March 2019

Employer: Luxoft Romania, Murex connectivity project

Responsibilities: participate in all phases of the SDLC according to Agile /SAFe methodologies in place

Project and tasks: Bloomberg market data enterprise content distribution managed interface an adapter between Bloomberg market data real-time platform and Murex real time bridging services enabling users to import real-time price market data in their end-user sessions. Added functional integration with Bloomberg Market Data Feed (B-PIPE), Entitlements Management and Reporting System (EMRS), DDM Local-Publish data for tightly controlled internal-only consumption and Zero Footprint on-cloud premises support leveraging Bloomberg Open API (BLAPI) client.

Technologies: Java 8, Java EE CDI API 1.x, Jboss Weld 2.x, Arquillian Weld, Camel 2.x , Google Guava, Bloomberg Open APIs BLAPI, Maven, Murex APIs, Cucumber, Fitness

Senior Associate Developer

Sep 2015 - April 2018

Employer: JPMorgan Chase & Co UK, Investor Services, CIB, Prime Brokerage, 35 Waterloo St, Glasgow Technology Center G2 6HS, www.jpmorganchase.com

Responsibilities: participate in various stages of microservices adoption and software development life cycle: user requirements analysis, writing detailed designs, implementation, L3 support, debugging and unit testing according to Agile methodologies in place, lead/trained JPMC resources and contractors (Mphasis, Accenture, Galatea Associates), active member of the Ignite Blockchain communities, part of global swaps architecture team since 2017

Projects and tasks:

Custody and Fund Services (CFS) Programme – aims to create a more efficient and uniform process for Contract for Difference (CFD) processing eliminating a multitude of manual client specific user development tools to process the product. CFS provides a scalable automated infrastructure across Investor Services impacting functions such as: reference data, trade and position management, corporate action and income processing, pricing and valuations, reconciliations, settlements, accounting and reporting

- Decomposition of equity swaps monolith platform into small manageable Microservices to allow trade capture/trade lifecycle and exception management scenarios with Pre-Trade system to allow CFD processing using IBML/FpML logical data modelling
- Architected a configurable, automated/on demand client reporting downstream feeder for various recipients supporting multiple deliverable mechanisms (SFTP, AMPS) using messaging systems and Enterprise Integration Patterns (Spring Integration)
- Provided market data integration with Reference Data Technology for securities, equity instruments and party/party account leveraging REST OpenApi Specifications and No-SQL databases
- Integrated Equity Swaps platform with middle office fund accounting system on sending assets, tax lots, cash, price and trades type messages leveraging FIX protocol, JPMC Moneta Bootstrap (Angular 2.x) and messaging systems
- Integrated In-memory distributed caching using Hazelcast for Equity Swaps query optimization and enhanced the corporate action workflow engine

Global Real Time Position Keeping Service - **GRIPS** –part of the US Equities Swap direct market access initiative aiming to offer a low-latency equity swap execution through the FIX internal order management service. GRIPS leverages Pivotal Gemfire to create an in-memory pool of allocated locates from Equity Finance trading desk and integrated with upstream systems to trigger automated requests when pool utilization falls below a designated threshold value.

- Architected and developed a automated testing regression tool using BDD for incremental software releases
- Integrate GRIPS with SonarQube a development efficiency index tool for code quality and continuous code inspection
- L3 support during EMEA start of day/intraday trading

Technologies: Java 6/7/8, Java EE (legacy platforms using JBoss), Spring 4.x framework (Core, Boot, JavaConfig, JDBC, Integration, Data, Retry, Cache, JMS, MVC), Spring Statemachine, Spring Pivotal Cloud Foundry, Spring Cloud Config, Angular 2.x with TypeScript, Mule ESB, Pivotal Gemfire, Hazelcast, Oracle Database, JSON, XML/FpML/IBML, Google Protocol Buffers v2.0, IBM MQ, HornetQ, ActiveMQ, AMPS (from www.crankuptheamps.com), Cucumber, Jacoco, Cobertura, Apache PIT, Google Guava, Oracle Database 12c, Jersey, Swagger 2.0 OAS, Springfox, Junit 4.x/5.x, Jackson, Vavr, CI/CD pipelines using TeamCity, Git/Bitbucket, IntelliJ IDEA Ultimate Edition, Microsoft Visual Studio Code

Senior Software Engineer**Mar 2014 – Aug 2015**

Employer: *COMPUTAS IT* Romanian subsidiary of foreign-owned systems integration and software development outsourcing company (2012 net sales in the range of millions of EUR, payroll less than 100), Bucharest, www.computas.ro

Responsibilities: participate in all phases of the software development life cycle: user requirements analysis, writing detailed designs, implementation, debugging and unit testing according to Agile methodologies in place.

Projects and tasks:

- Logistics hub: automated tracking of goods within the supply chain of onshore/offshore facilities of oil companies
- Architected and developed UI web application using XHTML, CSS, jQuery, XSL Transformations and Xpath; implemented REST-full services based on EPCIS - EPC Information Ser-

vices Standard and ISO 15926 industrial automation standards for: Cargo Containing Unit's, Organization, Hire, Journey, Leg, Observations, Documents, Events model; developed Templates, UI Components using SPARQL Web Pages for Legs, Journeys and Observations data models.

Technologies: javascript, jQuery, XSLT, XSD, XML, xHTML, Java 1.7, Apache Tomcat 7.x, Apache Maven 3.x, Apache CXF 2.7.x/ JAX-RS 2.0 - JSR 339, Google Guava, Apache Commons; Semantic: SPARQL, RDF/RDFS, SWP developed with TopBraid Composer Maestro Edition-IDE, TopBraid Live Enterprise Server, Oracle 12c with RDF support

Java Software Engineer

Aug 2013 – Feb 2014

Employer: KEBA Automation SRL, Romanian subsidiary of foreign-owned industrial, banking & energy automation company-Romanian subsidiary develops proprietary software for foreign company-manufacturer of automation equipment (2012 net sales lower than 10 Mil. EUR, payroll of less than 50 employees), Bucharest, www.keba.com

Projects and tasks: developed middleware software applications to be used with banking automation equipment. Performed detailed analysis of the incidents reported by customers, transactions reconciliation and application errors. Created bug reports based on reported incidents and applications log files. Developed proprietary communication protocol for banking terminals. Developed customized ATM transactions software for foreign and Romanian banks. Integrated 3rd party payment/money transfer systems-Western Union. Improved Maven build scripts for automatic deployment into several production environments.

Technologies used: Java 1.6, C# .Net 2.5, ActiveX, JavaScript, Bash shell scripting, Maven, Spring Core/MVC/ORM/JDBC/AOP/Security/JMS, Jasper Reports, Hibernate 3.x, Swing, Netbeans IDE, Netbean Visual Library API, JMS ActiveMQ, IBM MQ 6.x, Oracle, MySql, H2, Derby, Apache Commons, Google Guava, junit, dbUnit, EasyMock, Mockito, XStream, XML-Apis, JAXB, JAX-WS, SoapUI.

Freelance Java Software Engineer

Apr 2013 – Aug 2013

Contractors: Anritsu Srl, Italian subsidiary of foreign-owned measuring instrument manufacturer, Rome-Italy (project-based related to the engineering of measuring instruments proprietary software, 4-month project); Romanian systems integrator-one of Top 5 companies in segment (project-based work on a Client Relationship Management-CRM application for a major power utility company, 4-month project), Bucharest, www.anritsu.com

Tasks: performed reverse engineering work of the Hadoop version 1.x IPC low level protocol to C/C++, and integrated Hadoop into middleware MasterClaw engine; related to the CRM application: developed custom made modules of standardized files, designed portal user interface, integrated application with 3rd party SAP/Energy products. Published on Git-Hub for the open source community under <https://github.com/popovici-gabriel/projects.git>

Technologies: Java 1.7, JAXB, Oracle Server, SAP Java Connector 2.x, Hibernate 3.x, Spring MVC, Spring ORM, Spring JPA, Spring JDBC, Apache Wicket, Apache POI, Apache iText, Jasper Reports, Google Guava

Java Software Engineer

Dec 2011 - Feb 2013

Employer: Sabre Holdings, Airline Solutions US-based proprietary software development company-travel industry, USA-based job under H1B visa status

Responsibilities: Design, develop, integrate, unit test, code review software requirements according to Agile practices and methodologies in place

Projects and tasks: performed active software engineering role in the development of a complex online booking engine/e-commerce application.

Technologies: Java SE 1.6, Spring Core/WebFlow/ORM/JPA/JDBC, Apache CXF, junit,

Apache Commons, Hibernate.

Software Engineer/Systems Administrator

Jan 2011 – Nov 2011

Employer: Z-Terra Inc. US-based proprietary software development company for the oil exploration and production industry, US-based job under H1B visa status, www.z-terra.com

Tasks: provided technology support for employees and customers; managed small computer farm (50+ Unix/Linux systems) of high performance computer data centers; developed Z-Eos Seismic data inspection: GUI application viewer(2D) for seismic data.

Technologies: C/C++, Qt SDK, Qwt Project, Glib, lib PVM, cmake/qmake, Qt Creator, IDE, Eclipse CDT, SQLite, Stanford Exploration Lib - SEPLib.

Software Engineer

Nov 2007 – Dec 2011

Employer: Canadian Bank Note International Europe, Romanian subsidiary of one of the largest specialized foreign-owned printing companies worldwide, Bucharest (Romanian subsidiary develops specialized software applications for governments worldwide), www.cbnco.com

Projects: vehicle registration portal, driver license issuing system, passport issuing control systems, border management systems.

Tasks: implemented dynamic report generation using Apache POI, engineered change requests, improved error handling and logging mechanism, developed web application scheduler, developed centralized task scheduler mechanism using JAX-WS SOAP web services and java 1.5 concurrency API, engineering change requests, dynamic PDF generation, UI front end development.

Technologies: Microsoft Visual Studio 2005, Eclipse, Java 6, Hibernate, Crystal Reports, Apache XML-RPC, Servlet 2.4, Tomcat 6.x, Rhino, OpenSCDP, MFC, Apache Axis 1.4, Servlets 2.4, JSP 2.0, JSTL, Struts 1.3.10, Java Mail, Hibernate, Crystal Reports, Tomcat 5.x, Log4j, Ant, Java 5 SE, JSP/Servlets, JSTL, Javascript, iText, JAX-WS, Struts 1.2.9.

Internship – Junior Software Developer

Jun 2007 – Oct 2007

Employer: Reply IT, internship in Milan-Italy with an Italian software development firm

Projects: on-line banking system

Tasks: developed rich graphical user interfaces for the online banking system

Technologies: Java SE 1.5, JSP 1.2, JSF Apache MyFaces, Ajax4JSF(RichFaces), Java Servlets 2.3

Junior Software Developer

Aug 2006 – May 2007

Employer: Canadian Bank Note International Europe, Romanian subsidiary of one of the largest specialized foreign-owned printing companies worldwide, Bucharest (Romanian subsidiary develops specialized software applications for governments worldwide)

Projects: vehicle registration portal and vehicle technical inspection application

Tasks: web application development, bug fixing, unit testing

Technologies: Java SE 1.5, Java Servlets/JSP, Struts 1.2.9, Hibernate, Javascript, junit, Tomcat 5.x, Ant