

RIYAN SUGIARTO

SOFTWARE ENGINEER

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PROFESSIONAL SUMMARY

Backend Software Engineer with over 5 years of experience building secure, high-traffic core systems in the telecom and insurance sectors. I specialize in system design and automating complex workflows through smart AI services like document scanning, face verification, and voice features. A results-oriented professional, I have a proven track record of modernizing legacy software to slash operational costs and maximize application speed, bringing immediate execution velocity and stable, scalable architecture.

PROFESSIONAL EXPERIENCE

PT ASURASI KREDIT INDONESIA

Software Engineer

JAKARTA, ID

2025-Present

Key Responsibilities:

- **End-to-End Architectural Design:** Acted as the primary engineer responsible for the architectural design and full-cycle development of enterprise-grade B2B and B2C general insurance platforms, owning the technical roadmap from conceptual system modeling to live production delivery.
- **Technical Design & System Specification:** Formulated comprehensive Technical Design Documents (TDDs), architectural blueprints, and sequence diagrams to translate complex general insurance business requirements into clear engineering specifications, while building highly adaptive allowance and premium calculation engines.
- **Full-Stack System Architecture:** Architected a highly decoupled frontend-backend infrastructure using Angular for dynamic, responsive user interfaces and Java Spring Boot for high-concurrency backend processing, ensuring seamless scalability and long-term maintainability for retail users and corporate clients.
- **Custom Security Engineering:** Designed and implemented a comprehensive system security layer completely from scratch, architecting custom authentication mechanisms, secure session management, and end-to-end data encryption protocols to rigorously safeguard sensitive financial and policyholder information.
- **Enterprise System Integration:** Designed robust integration layers to seamlessly bridge general insurance products with complex legacy core financial systems, third-party partner platforms, and digital payment systems—including the integration of Midtrans payment gateway to automate secure, real-time premium collections.
- **Advanced Database Modeling:** Architected complex SQL relational database schemas with a strict focus on data integrity, normalization, and heavy query optimization to fluidly handle high-volume B2B transaction logs and multi-tenant B2C customer data.
- **Production Deployment & Stabilization:** Managed the technical transition of core systems from local development environments to live production servers, taking full ownership of environment configurations, performance profiling, and final system stabilization under heavy production loads.

Selected Project Experience

- **Portal Bisnis Askrindo - Insurtech Platform:** Spearheaded the architectural design, technical documentation, and full-cycle development of a unified B2B and B2C digital general insurance platform. Successfully launched and managed the technical pipelines for diverse insurance lines, including Property (Rumahku), SME (Usahaku), Marine (Bahari), Fire (PSAKI), Earthquake (PSAGBI), and Travel Insurance, integrating custom calculation logic, Midtrans payment gateway integration for seamless checkout experiences, and ironclad security barriers into a single ecosystem.

Stack Highlights:

- **Languages & Frameworks:** Java, Spring Boot, Angular, TypeScript, SQL
- **Tools & Architecture:** Technical Design Documents (TDDs), PlantUML, Custom Authentication, Full-Stack Decoupled Architecture, End-to-End Encryption, Midtrans API Integration
- **Databases & Storage:** Relational Databases (PostgreSQL / Microsoft SQL Server)
- **Insurance Products Managed:** Property (Rumahku), SME (Usahaku), Marine (Bahari), Fire (PSAKI), Earthquake (PSAGBI), Travel Insurance

PT MSIG LIFE INDONESIA

Software Developer

JAKARTA, ID

2024-2025

Key Responsibilities:

- **Microservices Design:** Design and maintain a highly resilient, distributed financial backend architecture using Spring Cloud, leveraging Eureka Server for intelligent service discovery and Zuul Gateway for centralized API management, security, and smart routing.
- **AI Service Integration:** Spearheaded the technical integration of third-party AI engines into digital application pipelines, deploying automated Optical Character Recognition (OCR), biometric Liveness Detection, Text-to-Speech (TTS), and Speech-to-Text (STT) mechanisms to enable advanced real-time user verification, accessibility features, and automated voice interactions.
- **Advanced Database Design:** Architect complex relational database schemas for PostgreSQL, establishing target indexing, structural partitioning, and explicit constraint policies to maintain strict data integrity, speed, and safety during extensive concurrent queries.
- **Decoupled Event Streaming:** Build and support highly decoupled, event-driven messaging networks using Apache Kafka to manage asynchronous workflows, ensuring seamless coordination and high data consistency across distinct service clusters.
- **Data Persistence Optimization:** Utilize the MyBatis mapping framework to build clean, optimized data access layers, writing precise SQL logic to reduce memory overhead and enhance object-relational mapping efficiency.
- **Secure Enterprise Gateways:** Implement enterprise-grade authentication frameworks using OAuth2 protocols and JWT signatures at the gateway level, defining fine-grained user access controls to protect sensitive financial portals.

Selected Project Experience

- **Fortify - Digital Life Insurance Platform (fortify.msiglife.co.id):**
Developed core components for the public-facing platform, building policy submission sub-services, configuring security policies via Zuul, and orchestrating extensive historical database migrations of active agent profiles using Spring Batch. Engineered the integration of third-party AI engines directly into the submission workflow, implementing advanced OCR for touchless identity document extraction, live face verification layers to ensure bulletproof onboarding compliance, as well as TTS and STT functionalities to power voice-driven interaction capabilities and accessibility services.
- **Andromeda - Digital Platform for Agency MSIG Life:**
Designed the entire architectural layout and database schema for the internal platform's Agent Financing module, engineering a custom financial calculation engine that processes loan requests, risk analysis, payout distributions, and automated compensation allowances.

Stack Highlights:

- **Languages & Frameworks:** Java, Spring Boot, Spring Cloud, MyBatis, Apache Kafka, Spring Batch
- **Microservices & AI Integration:** Third-Party AI APIs (OCR, Liveness Detection, TTS, STT), Eureka Server, Zuul Gateway
- **Databases & Storage:** PostgreSQL, Microsoft SQL Server
- **DevOps & Security:** Kubernetes, API Gateway, CI/CD Pipelines, Bitbucket, OAuth2, JWT Authentication

PT. PRUDENTIAL LIFE ASSURANCE

Backend Developer

JAKARTA, ID

2023-2024

Key Responsibilities:

- **Cloud Infrastructure Optimization:** Directed the architectural conversion of stream-processing services away from heavy Apache Flink dependencies over to lightweight, container-native Quarkus runtimes, achieving massive reductions in cloud memory overhead and infrastructure utility billing.
- **Real-Time Data Streaming Pipelines:** Designed high-velocity ETL data streaming pipelines utilizing Apache Kafka brokers to handle real-time SPAJ (Surat Pengajuan Asuransi Jiwa) transactional operations with strict zero-loss data constraints.
- **Enterprise Process Automation & Orchestration:** Developed and implemented integration layers connecting real-time data streaming runtimes (Apache Flink and Quarkus) with IBM BPM (Business Process Management / Process Designer) and BRMS (Business Rules Management Systems) to completely automate complex policy processing workflows and decision-making business logic.
- **AI-Driven Identity Integration:** Spearheaded the technical integration of third-party AI services for automated identity verification within the e-KYC system, ensuring highly secure and touchless customer onboarding.
- **Distributed Database Modeling:** Modeled high-performance, resilient data retention environments utilizing a hybrid of PostgreSQL relational tables and Couchbase NoSQL document structures to support instant read/write availability for global insurance policies.

Selected Project Experience

- **PruServices (AI-Powered e-KYC & Contact Updates):** Authored a high-security identity-verification API that seamlessly integrates with third-party AI verification engines for e-KYC processing. Implemented secure biometric validation and data extraction workflows using OAuth2 encryption to ensure data privacy and automated regulatory compliance.
- **Pruhub (Migration, Process Automation & Withdrawals):** Executed the core framework migration from Apache Flink to Quarkus, embedding automated validation rules via IBM BPM and BRMS to orchestrate policyholder fund withdrawals and live portfolio switching. Built robust fraud detection mechanisms and real-time transaction rollback capabilities into the financial routing engine.

Stack Highlights:

- **Languages & Frameworks:** Java, Quarkus, Apache Flink, Spring Boot, Apache Kafka
- **AI & Enterprise Automation:** Third-Party AI e-KYC APIs, IBM BPM, BRMS (Business Rules Management Systems)
- **Databases & Storage:** PostgreSQL, Couchbase
- **DevOps & Infrastructure:** Kubernetes, Bitbucket, API Gateway, CI/CD Pipelines

PT. XL AXIATA

API Developer

JAKARTA, ID

2022-2023

Key Responsibilities:

- **Monolith to Microservices Migration:** Spearheaded the massive architectural migration of legacy SOAR (TIBCO) infrastructure over to a decentralized microservices framework using Spring Boot and Spring Cloud, drastically improving system elasticity, deployment velocity, and infrastructure maintainability.
- **API Lifecycle & Gateway Management:** Managed the full development lifecycle of core RESTful APIs, configuring proxy rules, security restrictions, and rate-limiting metrics at the API Gateway layer to enable stable, secure integrations for external enterprise partners.
- **Asynchronous Event-Driven Messaging:** Engineered low-latency, event-driven service interaction mechanisms using Solace message brokers to enable highly scalable asynchronous communication channels across high-traffic telecommunications modules.
- **Code Quality & Testing Rigor:** Authored comprehensive unit tests and automated test suites to maintain high code coverage. Utilized SonarQube to scan codebases, systematically identifying and remediating code smells, technical debt, and deprecated libraries to guarantee long-term maintainability.
- **Performance Engineering & Testing:** Executed high-load stress testing and performance tuning using K6 to identify processing bottlenecks, analyze system endurance under peak telecommunications traffic, and optimize API response times before production releases.
- **Structured Logging & Observability:** Designed and implemented structured application logging strategies across microservices, utilizing Kibana to query, trace, and monitor centralized real-time log streams for rapid production troubleshooting and system anomaly detection.
- **Technical Documentation:** Maintained a rigorous standard for knowledge sharing by thoroughly documenting system architectures, workflow sequences, API specifications, and deployment runbooks within Confluence to streamline onboarding and cross-team collaboration.

Selected Project Experience

- **Info Paket:** Programmed a high-throughput, low-latency microservice that interfaces with core billing, subscription, and customer management systems to retrieve and serve real-time package subscription details to millions of active mobile users.
- **Info Quota:** Implemented a real-time data usage analytics tracking service that aggregates live network activity streams, using distributed caching frameworks and Solace messaging pipelines to feed threshold-based customer alerts instantly.
- **Incident Notification:** Developed an automated notification service integrated with network fault-monitoring nodes and Solace queues to immediately dispatch real-time SMS alerts regarding XL Home (Wi-Fi) outages and estimated repair timelines.
- **fulfillment-policy:** Co-authored an enterprise orchestration engine that executes strict business rules and customer eligibility checks for complex account modifications, serving as the secure validator between frontend layers and backend provisioning subsystems.
- **fulfillment-subscriber-retry:** Formulated a fault-tolerant asynchronous scheduling system utilizing intelligent exponential backoff algorithms and rollback triggers to safely retry or cleanly revert failed subscription requests caused by temporary network disruptions.
- **bulk-imei-registration:** Engineered a high-capacity parallel batch processing application that allows bulk ingestion and validation of device IMEIs against national government fraud-prevention records, optimizing data speeds through strategic database partitioning.

Stack Highlights:

- **Languages & Frameworks:** Java, TIBCO (BW 5 / BWCE), Spring Boot, Spring Framework, Spring Cloud
- **Databases & Caching:** PostgreSQL, Microsoft SQL Server, Oracle, Redis
- **DevOps, Messaging & Collaboration:** Kubernetes, K8dash, Solace, RabbitMQ, API Gateway, CI/CD Pipelines, Confluence
- **Testing, Quality & Monitoring:** K6 Load Testing, SonarQube, Kibana (ELK Stack), Junit

PT. ASURANSI KREDIT INDONESIA

JAKARTA, ID

Software Engineer

2020-2022

Key Responsibilities:

- **Backend System Architecture:** Conceptualized, designed, and maintained high-performance backend application modules using Java and the Spring Boot framework, ensuring system scalability and alignment with core corporate financial operations.
- **Government & Regulatory API Integration:** Formulated and executed secure, high-availability integration frameworks with national government web services, specifically interfacing with the Ministry of Finance (Kemenkeu) for data clearance and automating real-time electronic stamp duty (e-Materai) verification and legal processing during the policy-purchasing lifecycle.
- **Database Optimization:** Analyzed and optimized complex relational database queries while establishing strategic data indexing plans within PostgreSQL and Microsoft SQL Server to significantly decrease application latency and improve responsiveness.
- **Data Pipeline Management:** Built and managed automated end-to-end data pipelines to collect operational and transactional statistics, utilizing JasperReports and JRXML templates to generate precise financial reporting and automated reconciliation models.
- **End-to-End Testing:** Conducted comprehensive phase testing across the entire software development lifecycle (SDLC), driving unit testing, system integration testing (SIT), and supporting user acceptance testing (UAT) to guarantee stable production releases.
- **API Security & Server Management:** Managed on-premise server deployment architectures by configuring Nginx as a reverse proxy, safeguarding corporate environments through SSL/TLS encryption, firewall configurations, and secure JWT/OAuth2 token authentication protocols.

Selected Project Experience

- **Pemulihan Ekonomi Nasional (PEN):** Contributed directly to a high-priority government-backed digital initiative aimed at mitigating COVID-19 economic disruptions by engineering secure backend solutions and direct data synchronization pipelines with the Ministry of Finance (Kemenkeu) that streamlined the allocation and distribution of financial relief to informal sectors.
- **Agunan Bank Online:** Architected a dedicated digital insurance platform designed to accelerate bank collateral insurance applications for partner financial institutions, facilitating automated policy issuance for coverage claims up to Rp 10 billion for Class I construction projects and Rp 5 billion for Class II construction projects. Integrated automated e-Materai acquisition sub-services to automatically apply certified digital stamps onto policy forms at the point of sale.
- **Surety Bond Online:** Engineered a robust transactional guarantee platform that protects employers (Obligees) from principal defaults on construction and non-construction agreements, establishing contract compliance pipelines, government financial verification protocols, and secure document signing architectures.

Stack Highlights:

- **Languages & Frameworks:** Java, Spring Boot, Spring Framework
- **Databases:** PostgreSQL, Microsoft SQL Server
- **DevOps & Security:** Nginx, Shell Scripting, Linux Scripting, SSL/TLS, OAuth2, JWT Authentication
- **Reporting Tools:** JasperReports, JRXML Templates

CERTIFICATION

DIGITAL TALENT KOMINFO : PROFESSIONAL ACADEMY

Jakarta, ID

Digital Talent Scholarship: Data Science

2022

DIGITAL TALENT KOMINFO : PROFESSIONAL ACADEMY

Jakarta, ID

Digital Talent Scholarship Programming: HTML, CSS and Javascript

2021

EDUCATION

UNIVERSITAS INDRAPASTA PGRI

Jakarta, ID

Bachelor Degree Major in Computer Science; Minor in Computer Science

2022-2025

ENIGMA CAMP

Jakarta, ID

IT Bootcamp (Full Stack Developer)

2020

A 3+ months intensive bootcamp learning Learn how to be an IT Developer and also other skill such as english communication, teamwork etc. provides 12 weeks hands-on coding curriculum that focuses on mobile development with react native. Web development with react js. Backend development with java, nodejs, and Golang. Database with MySQL, PostgreSQL, MongoDB

POLITEKNIK HARAPAN BERSAMA

Tegal, ID

Associate's Degree Major in Computer Science; Minor in Computer Engineering

2016-2019

ADDITIONAL INFORMATION AND TECH STACK SUMMARY

- **Program & Project Management:** SDLC (Software Development Life Cycle), JIRA, Confluence, Agile/Scrum
- **Languages:** Advanced in Java, TypeScript, JavaScript, SQL
- **Backend Frameworks & Ecosystem:** Spring Boot, Spring Cloud, Spring Batch, Quarkus, Apache Flink
- **Frontend Frameworks & Libraries:** Angular, React, Tailwind CSS, SASS, Babel, Webpack
- **Message Brokers & Caching:** Apache Kafka, Solace, RabbitMQ, Redis
- **Databases & Storage:** PostgreSQL, Microsoft SQL Server, Oracle, Couchbase, MySQL, MongoDB
- **DevOps, Cloud & Infrastructure:** Kubernetes, Docker, AWS, Nginx, CI/CD Pipelines, Shell Scripting, Linux Scripting
- **Testing, Quality & Code Observability:** SonarQube, JUnit, K6 Load Testing, JMeter, Testing Library
- **Monitoring & Logging:** ELK Stack (Elasticsearch, Logstash, Kibana)
- **Enterprise Integration & Automation:** IBM BPM, BRMS (Business Rules Management Systems), Eureka Server, Zuul Gateway, Firebase, Postman
- **Reporting Tools:** JasperReports, JRXML Templates, Microsoft Excel
- **Domain Expertise & Core Skills:** Technical Design Documents (TDD), Sequence Diagrams, PlantUML, AI Integrations (Optical Character Recognition / OCR, Biometric Liveness Detection, Text-to-Speech / TTS, Speech-to-Text / STT), Clean Code, Web Performance Optimization, Web Accessibility, RESTful APIs, GraphQL, JSON