# Dhia Eddine Gharsallaoui

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# SUMMARY

Distributed Platform Architect with 3+ years of experience in designing and implementing cloud-native solutions. Expert in building scalable microservices architectures, Kubernetes infrastructure, and real-time data processing platforms. Specialized in developing secure, high-performance systems using modern technologies including Golang, Apache Spark, and blockchain protocols. Strong focus on DevOps practices, infrastructure automation, and system observability. Active contributor to open-source projects with a proven track record of delivering complex technical solutions.

# EXPERIENCE

## **Solution Architect**

Skilld | February 2022 - Present | Paris, France

- Designed and developed scalable microservices using Golang, implementing domain-driven design principles and clean architecture patterns for high-performance distributed systems.
- Architected and implemented a multi-cluster Kubernetes infrastructure with comprehensive observability stack using Prometheus, Grafana, and OpenTelemetry, achieving end-to-end visibility and sub-second monitoring capabilities.
- Designed and implemented enterprise-wide SSO using Ory ecosystem (Kratos, Hydra, Oathkeeper), supporting multiple authentication providers (Google, GitHub, GitLab, LinkedIn) and fine-grained RBAC.
- Engineered high-performance data processing pipelines using Apache Spark and Delta Lake, implementing comprehensive data quality checks and real-time analytics with Apache Druid integration.
- Built scalable event-driven architecture using Apache Kafka, NATS, and Redis, enabling real-time event processing with sub-second latency and automated scaling capabilities.
- Developed and maintained infrastructure automation on bare metal servers using Ansible, implementing GitLab CI pipelines for continuous deployment and testing.
- Created and optimized centralized logging architecture using Graylog and Elasticsearch, implementing custom parsing rules and alerting mechanisms.
- Integrated Hive Metastore and implemented comprehensive data catalog management, improving data discovery and governance.
- Designed and implemented PKI infrastructure with automated certificate management and renewal systems.

## Freelance Blockchain Developer

#### ChainsAtlas | March 2024 - Present

- Developed and optimized multi-chain bridge protocols integrating EVM-compatible chains with XRPL, implementing secure cross-chain asset transfers and NFT operations with robust transaction processing.
- Built blockchain gaming reward systems with multi-signature validation, incorporating sophisticated retry logic and nonce management for improved transaction reliability.
- Created verifier and guardian systems for secure cross-chain operations, implementing comprehensive security protocols and monitoring.
- Designed and implemented agnostic blockchain operations using Solidity and TypeScript, focusing on secure multisignature wallet functionalities.

## **Freelance Software Engineer**

idatase GmbH | January 2024 - March 2024 | Remote

- Developed scalable data ingestion pipeline using Python/Flask and PostgreSQL, implementing comprehensive monitoring and error handling.
- Implemented containerized microservices architecture using Docker Compose and Kubernetes, with automated deployment pipelines.
- Designed and implemented real-time metrics collection system with custom dashboards and alerting rules.

# **OPEN SOURCE CONTRIBUTIONS**

#### Mage-ai - Open Source

Led the implementation of LDAP authentication system and Apache Druid integration, enhancing enterprise security and analytics capabilities. Developed centralized logging system with comprehensive monitoring.

#### Go-mail - Open Source

Architected middleware pattern and implemented OpenPGP encryption with comprehensive test coverage, improving email security and maintainability.

## Go-RTE - Open Source

Created a Go client library for RTE APIs with clean and uniform interaction patterns, facilitating integration with energy management systems.

## SKILLS

## Cloud & Infrastructure

Kubernetes, Docker, Ansible, GitLab CI, Helm, Bare Metal Infrastructure, Multi-cluster Management

## **Data Engineering**

Apache Spark, Apache Kafka, Delta Lake, Apache Druid, PySpark, Apache Airflow, Hive Metastore

**Programming & Blockchain** Go (Golang), Python, Scala, Solidity, TypeScript, Smart Contracts, Cross-chain Protocols

#### **Observability & Monitoring**

Prometheus, Grafana, Elasticsearch, OpenTelemetry, Graylog, Jaeger, AlertManager

# **Databases & Caching** PostgreSQL, TimescaleDB, Redis, DragonflyDB, Trino, Apache Cassandra

#### **Security & Authentication**

Ory Ecosystem, RBAC, OAuth2/OIDC, PKI, Certificate Management, Multi-factor Authentication

## EDUCATION

#### Master's Degree in Computer Science

MINES ParisTech | 2020 - 2021

Minor in Mathematics | Focus on Distributed Systems and Cloud Computing

#### **Engineer's Degree in Industrial Engineering**

ENIT | 2018 - 2021

Minor in Data Science | Specialization in Big Data Analytics