# Ilija Matoski

Freelance cloud architect and software engineer. AWS, GCP, Kubernetes, platform engineering, custom software.

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## SUMMARY

Freelance cloud architect and software engineer with 15+ years. Through my consulting practice, Enhalon, I work hands-on with engineering teams on cloud platforms, Kubernetes, DevOps, and the custom software around them, mostly on AWS and GCP, with private cloud, colocation, and hybrid setups when that is the fit. I build the shared platform other teams depend on: landing zones, account structure, networking and identity, CI/CD, and the developer tooling around it, and I have run AWS landing zones spanning hundreds of accounts and the workload teams on them. Across the stack I work in Go, Python, and TypeScript/Node.js, and coach the team that takes it over.

I co-organize the Go Amsterdam meetup and speak at meetups and conferences on platform and software engineering.

## WORK EXPERIENCE

July 2022
Present

### Founder

Enhalon · Netherlands

I started Enhalon as my own consulting practice, so I can work hands on with engineering teams on cloud platforms, Kubernetes, DevOps, and the custom software that is missing around them.

- Cloud platform engineering on AWS and GCP: landing zones, multi-account setup, workload-team onboarding.
- Private cloud, colocation, and hybrid infrastructure: datacenter design, dedicated hardware, and cross-provider setups that bridge colo and public cloud.
- Kubernetes and container platforms: setup, operation, multi-tenant cluster design, and cleanup of existing clusters.
- Custom platform tooling: Terraform providers, HashiCorp Vault plugins, change-management and compliance frameworks.
- Observability with Grafana, Prometheus, Pyroscope, and OpenTelemetry across services, tests, and staging.
- Automation and CI/CD pipelines, including migrations off legacy systems like Jenkins.
- Monolith-to-microservices refactors and the architecture work around them.
- Custom software built around a specific business problem.
- DevOps coaching for the team that owns the practice.
- Talks and workshops on platform and software engineering.

March 2026
June 2026

Delivered through Enhalon

### Cloud Platform Consultant

DataChef · Netherlands

A short engagement where I optimized DataChef's own AWS landing zone, put FinOps in place across the estate so teams could see what they were spending, and improved their open source AWS Data Landing Zone project.

- Optimized DataChef's own AWS landing zone: multi-account structure, IAM and SCPs, networking, and guardrails.
- Implemented extensive FinOps across the AWS estate: cost allocation and tagging, per-team budgets, and rightsizing, so teams could see and own their spend.
- Integrated AI tooling on Amazon Bedrock into the FinOps workflow for intelligent cost reports and alerts on spend and anomalies.
- Improved their open-source project, the AWS Data Landing Zone, a CDK construct in TypeScript and Python for multi-account AWS environments (Organizations, SCPs, IAM Identity Center, networking, Control Tower). https://github.com/DataChefHQ/aws-data-landing-zone

TECHNOLOGIES/TOOLS USED AWS CDK · TypeScript · Python · AWS Organizations · IAM Identity Center · Control Tower · VPC networking · AWS Budgets · Cost Explorer · Amazon Bedrock · FinOps

April 2024
March 2026

Delivered through Enhalon

### IT Consultant

PwC · Netherlands

There were two strands to this one. I modernized an internal platform from a monolith into microservices on Kubernetes with real observability, and built a self service developer environment platform that ended up being used across territories.

- Built a self-service development-environment platform on Coder, hosted on Kubernetes inside the firm's network. Hundreds of developers use it, with onboarding cut from hours of setup plus weeks of troubleshooting to minutes, on disposable browser-based workspaces that work across territories regardless of laptop policy or hardware.
- Integrated AI coding assistants (GitHub Copilot, Cursor, and a custom internal assistant) into the developer platform, so builders work with AI assistance directly in their workspaces.
- Refactored and built services in Go, Node.js, and Python with React and Angular front ends.
- Migrated CI/CD from Jenkins to GitHub Actions and moved deployments onto Kubernetes.
- Built out testing with Jest and Playwright wired into CI, and observability with Grafana, Prometheus, Pyroscope, and OpenTelemetry.
- Consolidated boilerplate into reusable service templates and mentored engineers across dev and ops.
- Tightened the monitoring, alerting, and incident workflow.

TECHNOLOGIES/TOOLS USED Go · Node.js · TypeScript · Python · React · Angular · Kubernetes · Coder · GitHub Actions · Jest · Playwright · Grafana · Prometheus · Pyroscope · OpenTelemetry · MinIO · GitHub Copilot · Cursor · microservices

July 2022
March 2024

Delivered through Enhalon

### Lead Cloud Consultant

LeasePlan · Netherlands

I worked on the foundations of the AWS landing zone, and on the in house tooling that the workload teams use to operate on top of it. LeasePlan runs around 1.9 million vehicles across 29 countries on that estate, so the platform has to hold up.

- Owned the AWS multi-account landing zone that hundreds of accounts and workload teams ran on: a standardized account structure (per team and per environment), centralized identity and SSO, a designed network layer with VPCs, segmentation, and cross-account connectivity, and shared services for logging and identity.
- Set the security and governance baseline with IAM and Service Control Policies, automated guardrails, and centralized monitoring, replacing the per-team and per-region drift so teams deployed into a known-good baseline instead of building the foundations themselves.
- Cut new-workload onboarding from weeks to days and reduced manual provisioning and compliance effort by about 70% on the team's own measurement.
- Replaced JFrog Artifactory (about 1.8M EUR per year) with a self-hosted artifact repository at about 100K EUR per year, a 95% reduction, with no change to engineers' workflows.
- Built custom Terraform providers and HashiCorp Vault plugins, and a change-management and compliance framework in Go that automated the common checks and produced audit trails as a side effect.
- Ran the self-hosted GitLab instance and its CI/CD: runners, pipeline configuration, and keeping builds fast across the workload teams.
- Wrote platform-side software so users had a coherent way to interact with the platform.
- Contributed to architecture decisions and worked across teams on platform problems.

TECHNOLOGIES/TOOLS USED AWS (IAM, SCPs, Organizations, S3, Lambda, API Gateway, CloudWatch, X-Ray, serverless) · Kubernetes · Terraform · HashiCorp Vault · Consul · Ansible · Go · Python · self-hosted GitLab CI/CD · Datadog · OPA · Helmfile

October 2022
Present

### Founder / CTO

MSP MAJSERVERPLEJS DOO · Macedonia

I co-founded MSP and I lead the technical direction. The business started with physical servers in a rack, and has grown into colocated infrastructure and private EU cloud platforms for managed services customers.

- Architected and operated the server, storage, and network infrastructure.
- Designed the private EU cloud environments that host customer workloads, dedicated and virtualized.
- Set the standards for monitoring, backup, access control, and recovery.
- Introduced automation and standard operational processes as the customer base grew.

- Owned datacenter and vendor relationships, procurement, hiring, budgeting, and customer-facing solution design.
- Defined the long-term technical roadmap while staying involved in day-to-day architecture and operations.

June 2019
June 2022

### Mission Critical Engineer

Schuberg Philis · Amsterdam Area, Netherlands

I worked directly with Enexis, KLM and NS on landing zones for AWS, GCP and Azure, multi tenant Kubernetes, and a migration from ECS to Kubernetes. There were a few specialized builds as well, a GDPR compliant PII store for KLM, and software for the Dutch trains that runs at the edge.

- Stood up an AWS landing zone in 2019 for Enexis, a Dutch grid operator serving millions of households, that grew to hundreds of accounts, and extended provisioning into Azure with one cross-cloud workflow for environments and policy.
- Built a cost-visibility model (tagging, per-team budgets and alerts) that made cloud spend attributable, with automated security response for misconfigured buckets and unexpected IAM changes.
- Designed and built a GDPR PII platform on GCP for KLM, an airline serving millions of passengers: a central repository on Cloud Spanner with ETL from dozens of legacy systems, and a Cloud Functions and Pub/Sub workflow engine handling subject-access and erasure end-to-end. Cut GDPR response from weeks to minutes, with headroom for 10,000 requests per second.
- Built a GCP landing zone for several teams at KLM.
- Ran the ECS-to-Kubernetes migration: multi-tenant clusters for shared services and dedicated clusters for stricter isolation. New environments dropped from weeks of tickets to hours of self-service.
- Helped grow the engineering team, supported AWS and GCP customers on architecture, ran workshops, and worked on RFPs and tenders that fed into customer contracts.
- Developed edge software for Dutch trains (NS), including real-time simulation software for testing.

**CLIENTS** Enexis · KLM · NS

**TECHNOLOGIES/TOOLS USED** AWS (IAM, SCPs, Organizations, S3, Lambda, API Gateway, CloudWatch, X-Ray, serverless) · GCP (Cloud Spanner, Pub/Sub, Cloud Functions) · Azure · Kubernetes · Terraform · HashiCorp Vault · Consul · Ansible · Go · Rust · Node.js · TypeScript · Python · self-hosted GitLab CI/CD · React · Vue.js · Jest · Grafana · Prometheus · Jaeger · ELK · microservices

June 2016
May 2019

### Principal Engineer, Team Lead, Architect

Pointer Brand Protection · Amsterdam Area, Netherlands

I joined Pointer Brand Protection as a person with extensive experience in microservices as it was a new area for the company, so I can help the company move from a monolith to microservice architecture.

Development and architecture of a in-house system (IACC MarketSafe) for an advanced online brand protection solutions.

Reworking the old system into a microservice architecture, and implementing core functionality for the solution.

- **Revlect**, an in-house system that uses advanced algorithms to quickly identify and prioritize the most damaging counterfeit sellers, webshops, and social media accounts.
- **IACC MarketSafe**, a pilot program for the IACC (International AntiCounterfeiting Coalition) that helps platform track counterfeit, and help take them down for the members.

#### Responsibilities

- Overall architecture and infrastructure for all projects
- Development of high performance distributed microsevices written in Golang, Node.js, PHP
- Analyzing the requirements, and designing the system, planning the network and server architecture, infrastructure and specifications
- Mentoring and coaching of team mates
- Scrum Master
- Supporting the company's old infrastructure, and design and implementation of in-house infrastructure on our own dedicated hardware
- Building high performance core services that are required for tying all the services together, and internal communication.
- Continuous integration and optimization of the build pipeline
- Refactoring a Monolith into Microservices
- R&D into Machine Learning and image recognition
- Responsible of speccing, designing and implementation a high availability cluster.
- Implementing loadbalancers with failovers for outside access to the required services.

- Using ansible to automate software provisioning, configuration management, and application deployment
- Planing a migration from one provider to another without downtime

**TECHNOLOGIES/TOOLS USED** Golang · Docker Swarm · Kubernetes · Gitlab · CI/CD · Nginx · Tensorflow · Ansible · OpenCV · Machine Learning · Artificial Intelligence (AI) · node.js · React · Vue.js · PHP · CSS · HTML5 · JavaScript · MongoDB Cluster · MySQL (Percona) · ElasticSearch Cluster · ELK · Redis · Amazon AWS · EC2 · Debian · VPN · heartbeat · corosync · Proxmox · gRPC · protobuf · RabbitMQ · Microservices · Traefik · Istio · ZeroMQ · Cassandra · Kafka · OpenTracing · Zipkin

November 2012
June 2016

## Consultant, Software Architect, Senior Software Engineer

Covantia LLC

Development of high performance distributed microsevices written in Golang, that are used in various schools in LA

Development and design of an Event Processing System, used to generate actions (sending emails, creation of objects, time based actions, sending notifications) based on the events of any external software. The ability to create processing workflows using an UI, and integration with various systems.

Also working as a consultant for the company on various other projects that the company has, as a Software Architect, and as a Network and System administrator for the company needs.

### Responsibilities

- Overall architecture and infrastructure
- Analyzing the requirements, and designing the system, planning the network and server architecture and specifications.
- Continuous integration and optimization of the build pipeline.
- Scalability, running on multiple machines, for fast processing of queries (1000 – 2000 a second) for Event Processing System, ability to just add new servers to the pool for increased processing power.
- Ability to design a work-flow in a simple manner, using an UI, having the ability to make the actions dependable on others and share the data between the actions in a single workflow. Ability to assign complex rules that evaluate to boolean algebra, that can execute the actions based on the data passed in the events.
- WebRTC for audio and video communication
- RESTfull API Interface
- Different communication protocols for the service, using an API, Socket.IO, SQS, SNS/SQS

**TECHNOLOGIES/TOOLS USED** Golang · Kubernetes · Docker Swarm · PWA · CI/CD · node.js · Android · PHP (CodeIgniter) · CSS · HTML5 · JavaScript · MongoDB Cluster · WebRTC · SNS/SQS · SQS · ElastiCache · Redis · Amazon AWS · EC2 · Route 53 · DynamoDB · S3 · RDS · jqGrid · jQuery · LoDash · Underscore · Debian · Cassandra · Kafka · OpenTracing · Zipkin

December 2013
February 2016

## Solution Architect, Tech Lead, Senior Software Engineer, Hardware Engineer

Sciencix

In charge of research and development of a networked dissolution tester, including hardware, software, on-line cloud management software, and android application (that can control a dissolution tester) which can remotely control them, schedule tasks when to run, and running validations on the instruments based on the data we collect, and external validations, to make sure they are in proper working order. Planning and speccing the network infrastructure required for the product.

And also reverse engineering the hardware and software of older models on the market so they can be used with our platform.

Working with design concepts related to programming and development of existing resources as well as research of potential future resources. Responsible for the company's AWS infrastructure.

### Responsibilities

- Analyzing the requirements, and building a prototype
- Building hardware, PCB, software, creating interfaces for automatic firmware updates for the hardware
- Writing software for the on-line cloud management software, in node.js and angular
- Writing a CEP (Complex Event Processing) system using Esper, for real-time notification of various conditions, like critical failures
- Implementation of encryption standards for data storage
- Planning the network and server architecture specifications
- Creating images of the server for easier deployment

TECHNOLOGIES/TOOLS USED PHP · HTML5 · CSS · JavaScript · AngularJS · node.js · Android · Java · embedded C · Python (for developing command-line tools) · C/C++ (building some modules for node.js) · MongoDB · Redis · ATmega · PIC · ARM · Debian · Cassandra · Kafka · OpenTracing · Zipkin

December 2012
January 2014

## Senior Software Engineer, Tech Lead, Software Architect

Mars Omega LLP

Development and architecture of a inhouse system for information/intelligence gathering and analysis of the data, and is used for storing and organizing the data. This is a tool for people to enter data and link the data together so we can have a view of how the data correlates to each other and also to generate relationships and see other connections between them. It also grants you the ability to work on multiple data at the same time, providing a centralized view in which you can add stuff and organize.

### Responsibilities

- Planing architecture, planing the server architecture, database deployment
- Building the API for the front-end
- Building a front-end interactive dashboard, that can be used, for giving you a centralized view of the whole system in one place.
- Database sharding, replication, setup and running on multiple machines over SSH tunnels, for increased security.
- Design, plan, and implementation of advanced security system that monitors your every action, making sure they don't do what they are not supposed to do, and sending real time messages to the users
- Messaging system, that allows for people to mark messages as unread, and even use them as tasks, also provides notifications if the users to whom is sent has seen the message or not.
- Setting up the systems servers (development, production, and staging), firewalls, apache, nginx, compiling dependencies, load-balancing
- System for visual organization of data, correlation between data.
- Advanced system for data correlation and understanding, using GIS, OpenLayers, Goggle Maps, for mapping data on the whole planet, and replaying events.

TECHNOLOGIES/TOOLS USED PHP (Yii) · CSS · HTML5 · JavaScript · jqGrid · jQuery · LoDash · Underscore · node.js · MongoDB · Redis · GIS (GeoServer) · OpenLayers · Google Maps · Debian · CentOS · Ubuntu · heartbeat · KVM · iptables · Subversion

January 2011
November 2012

## Senior Software Engineer, Tech / Team Lead, Security Administrator, Network and IT Specialist

MI-C3 · Skopje, Macedonia

In my time in MI-C3 I worked on many projects, the two most important ones are:

- **Mi-bubble (Version 6.8)**, a system that is offering a customized solution for managing, deploying and tracking an organization's assets, being movable, non-movable as well as taking into consideration the human element. This system is used by multinational companies, tracking their assets all over the globe.
- **TagNGo**, In charge of creating the software architecture for a GPS safety system, used by parents to track their children. This was a real time tracking system, with a max delay of 5 seconds. Building such a system and designing it had its own challenges and rewards.

### Responsibilities

- System Architecture, planning, development, integrations for Platform 6.8, MI-NCC, TagNGo
- Integration of different systems into one, integrations of various DVR, NVR providers into one centralized system. Integration of Motorola PushToTalk Radio into a web based system.
- Creating system for managing assets, tracking assets, management of door controls, gates, video/audio systems
- Creation of a web interface for video conferencing, and the ability to dial out directly from the interface to a telephone line.
- Maintaining the company and it's subsidiaries network infrastructure
- Management of DNS, DHCP, Subversion, Mail, Firewall.
- Integration of Google Maps (paid version), OpenLayers, for mapping various devices like GPS, Doors, Gates, Assets, People
- Planed and designed a data center, including power requirements, blade servers, cables, wiring, cooling, multiple network lines, line aggregation, networking equipment, SAN
- Replication of data across multiple data-centers, SAN storage.
- Failure scenarios, and how to solve them, including SRP system
- Implementation of Esper CEP system for complex event processing, of data received by various systems and devices.

TECHNOLOGIES/TOOLS USED InterSystems Cache · InterSystems ObjectScript · InterSystems ZEN · PHP · Java · Android · JavaScript · jQuery · Underscore · LoDash · Asterisk · DNS · DHCP · VPS · Shared Hosting · VoIP · HTML5 · CSS · DVR · NVR · Motorola · Hadoop · Cisco · NoSQL · MongoDB · CouchDB · Map/Reduce · SRP systems · MySQL · PostgreSQL · Amazon AWS · Route 53 · WebRTC · Debian · CentOS · RedHat · Linux · Ubuntu · iptables · Google Mail Administrator · GPS Devices · LMU-2000 · CalAmp · Subversion · Squid · Esper · VMware · KVM

June 2010
December 2010

### Senior Software Engineer, Technical Lead, Teacher

dcom · Ginza, Tokyo, Japan

I joined dcom as a Team Lead. My main role was to build a team of young engineers which I would personally mentor into using multiple technologies and do projects together. Our projects were around the concept of e-Learning. The end result was an e-Learning system which was web based, but also included a mobile client that tracked the user sessions across devices.

#### Responsibilities

- Writing Android applications both for public use and internal use
- Writing games in Android
- Teaching the new employees on the used technologies
- Managing the team, assigning tasks

TECHNOLOGIES/TOOLS USED C# .NET · ASP .NET · PHP · Java · Android · JNI

November 2009
April 2010

### Senior Software Engineer, Technical Lead

Seavus · Skopje, Macedonia

Worked on providing services and continuous maintenance of a local telecom provider. Our team directly managed the application service including telephony systems, CMS, and collecting anonymous data for analysis and further improvement of the services we provided. The development included writing modules for the system in PHP and JavaScript. The databases which were used were based on relational SQL databases.

#### Responsibilities

- Analyzing datasets from various databases, so I can build a system for collection, processing and analysis of the data
- Writing software for management and visual aid for the collected, processed and analyzed data
- Writing the plugins for WordPress
- Writing various systems based on SugarCRM CE
- Installation and maintenance of BladeServers for our government
- Writing software for integration of telephony systems like Asterisk PBX, into telephone lines, and into the web interface.

TECHNOLOGIES/TOOLS USED PHP · HTML · CSS · JavaScript · Asterisk · Subversion · Linux · Debian · CentOS · RedHat · jQuery · Underscore

April 2009
May 2009

### Software Developer

Self-Employed (Projects) · Skopje, Macedonia

Designed and built an online job-search site.

- Analyzed the requirements.
- Designed the database schema.
- Built the software.

TECHNOLOGIES/TOOLS USED PHP · HTML · CSS · JavaScript · Subversion

2001
2008

### Senior Software Engineer, Solution Architect, Network and IT Specialist

Self-Employed (Projects) · Various

Long-running side work across desktop applications, web design, solution and software architecture, network and SAN architecture, security consulting, and business analysis.

**TECHNOLOGIES/TOOLS USED** ARM · ASP .NET · ATmega · AWS (EC2, RDS, DynamoDB, ElastiCache, S3, Route 53, SNS/SQS) · Android · AngularJS · Apache Jena · Apache MINA · Apache · Arduino · Asterisk · Backbone · C# .NET / .NET 5 · C/C++ · CDN · CalAmp · Cassandra · CentOS · Cisco · CodeIgniter · CouchDB · DHCP · DNS · DVR · Debian · Esper · ExtJS · GIS (GeoServer) · GPS devices · Google Guice · Google Maps · HBase · HTML / HTML5 · Hadoop · Hazelcast · Infinispan · InterSystems Cache / ObjectScript / ZEN · JNI · Java · JavaScript · Jersey / JAX-RS · KVM · LMU-2000 · Linux · Lodash · MariaDB · Map/Reduce · MongoDB · Motorola · MySQL · MSSQL · NVR · Neo4j · Netty · NoSQL · OpenLayers · Oracle · PHP (Yii, CodeIgniter, Slim) · PHP APC · PIC · Perl · PostgreSQL · Python · React · RedHat · Redis · Riak · SRP systems · Squid · Subversion · Ubuntu · Underscore · VMware · VPS · VoIP · WPF · WebRTC · ant · embedded C · heartbeat · iptables · jQuery · jqGrid · make · nginx · Node.js

June 2008
July 2008

### Software Engineer

ASPEKT · Skopje, Macedonia

Web work on a project using Classic ASP, PHP, and JavaScript with MySQL and SQL Server 2005: news sites, classified-ad sites, market-value sites, and an internal leasing application for Raiffeisen Kosovo.

- Analyzed the requirements.
- Wrote the software.
- Designed the database schema.
- Wrote video-conversion software triggered after upload.

**TECHNOLOGIES/TOOLS USED** Classic ASP · PHP · CSS · JavaScript · MySQL · Microsoft SQL Server 2005 · ffmpeg · ImageMagick · Subversion

## EDUCATION AND TRAINING

### Master of Science and Engineering, Software Engineering

Faculty of Electrical Engineering and Information Technologies, Skopje (Macedonia)

EQF Level 7

### Bachelor of Science / Bachelor of Computer Science, Information Technology and Automation

Faculty of Electrical Engineering, “Ss Cyril and Methodius” University, Skopje (Macedonia)

EQF Level 7 · 10 Semesters

## ADDITIONAL INFORMATION

### Achievements

- Software architect for several projects, and leading a team of people, where management and implementation was critical.
- Successfully managed a team of developers both in term of technology and human aspect, where I was in charge of the development and release cycle of the projects in question.
- Acting in a mentoring capacity for a period of years getting new software engineers up to speed, for various technologies. Experience in providing a course for software engineers in system design/architecture, and various software technologies.

### Consultancy

- Network infrastructure
- Software Architecture
- Software design
- Viability and prototyping of systems (both Hardware and Software)
- Server kernel optimization and hardening
- Security audit