

# BILAL KÖSE

Senior Software Engineer | .NET · Kubernetes · Microservices · Distributed Systems

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## PROFESSIONAL SUMMARY

The code I write processes millions of transactions every day — reliably, at scale, and without compromise. With 10+ years of experience across fintech, e-invoicing, and digital infrastructure, I design systems that power critical operations for thousands of enterprise clients. I've cut processing latency by 60%, reduced production errors by 45%, and led platform migrations for services handling over 2 million daily requests. I take full ownership of what I build — from architecture to production, from the first commit to the last alert.

## CORE COMPETENCIES

Backend Architecture & System Design | Microservices & Event-Driven Systems | High-Throughput API Development | Performance Optimization & Reliability | CI/CD & GitOps Pipelines | Kubernetes Administration (Self-Hosted) | Distributed Systems & Messaging | Technical Leadership & Mentorship | Legacy Modernization | Observability & Incident Response | E-Invoice & Financial Document Processing

## TECHNICAL SKILLS

Backend	.NET, C#, ASP.NET Core, Web API, Entity Framework Core, Java, Spring Boot
Architecture	Microservices, Event-Driven Architecture, CQRS, Clean Architecture, SOLID, Domain-Driven Design
Data & Messaging	MS SQL Server, Redis, RabbitMQ, Kafka, MassTransit
DevOps & Cloud	Docker, Kubernetes, GitLab CI, Jenkins, ArgoCD, Rancher, Azure, AWS
Observability	Graylog, Sentry, SonarQube, OpenTelemetry, Centralized Logging
Security	PKCS#11 HSM, XAdES, PAdES, KamuSM compliance

## PROFESSIONAL EXPERIENCE

### Senior Software Engineer – Teamsystem · Mikrogrup

2024 – Present

Engineer on Turkey's largest e-invoice platform processing 500K+ documents/day, 2M+ API requests/day, 2K+ msg/sec peak (RabbitMQ), with 99.9% uptime SLA serving 15K+ enterprise clients. Architected event-driven microservices (RabbitMQ + MassTransit) across 5+ high-traffic services; improved P99 API latency from ~350ms → <200ms through async pipeline redesign. Reduced incident resolution time by ~40% by implementing request tracing (X-Request-ID) and centralized observability via Graylog. Accelerated release cadence by contributing to Kubernetes-based GitOps pipelines (Jenkins, ArgoCD) across production environments. Led cross-service architecture reviews and established resilient error-handling and observability standards — patterns adopted as the team's engineering baseline across all production services.

### Senior Software Engineer – Team.Blue · Natro

2022 – 2024

Engineered backend services for Turkey's #1 domain & hosting platform — part of Team.Blue group (2.5M+ customers, 22 countries) — managing 800K+ domains, serving 300K+ customers, and processing 5K+ daily transactions (activations, renewals, payments). Reduced production error rates by ~45% and improved API response times by ~30% by leading full-stack migration of 10+ legacy VB.NET services — covering domain activation, hosting provisioning, payment processing, and customer management — to .NET 7. Expanded structured logging coverage across all migrated services, enabling end-to-end request tracing and cutting incident detection time by ~50% via Sentry integration. Optimized MSSQL performance through indexing and query refactoring, reducing average query execution time across high-traffic provisioning services. Established migration patterns and code standards adopted as the team's architecture baseline for all subsequent modernization projects.

### Software Engineer – MayalCT

2020 – 2022

Reduced system latency by ~25% and improved operational efficiency by ~35% on a real-time video platform supporting 1,000+ concurrent users. Validated 100-participant simultaneous video sessions with screen sharing under production load, enabling full-scale deployment. Built and shipped scheduling, session management, and tracking modules across the full stack (.NET + JavaScript), integrating directly with Jitsi Meet-based video infrastructure under high-concurrency production load.

### Full-Stack Developer – Pardus Software

2018 – 2020

Designed and shipped full-stack web applications using ASP.NET Core, MVC, and MySQL for SME clients — owning architecture, database schema, business logic, and production deployment end-to-end. Implemented reliable background job processing pipelines with Hangfire for scheduled tasks, automated notifications, and batch data operations across multiple concurrent client projects. Progressed from web developer to independent freelance engineer within 12 months — independently scoping, building, and delivering .NET solutions for diverse business requirements.

## KEY PROJECTS

### Self-Hosted Kubernetes Production Lab

2023 – Present

Designed and self-manage a bare-metal Kubernetes cluster running 12+ production-grade services on personal infrastructure, publicly accessible via custom subdomains. Services include: GitLab (CI/CD), SonarQube (code quality), ArgoCD (GitOps), Rancher (cluster management), Jenkins (automation), Graylog (log aggregation), RabbitMQ (messaging), NuGet (package registry), File Server — all under bilalkose.com.tr. Demonstrates end-to-end DevOps ownership: provisioning, networking, TLS, monitoring, and continuous delivery — fully self-managed outside of working hours.

Kubernetes | ArgoCD | GitLab CI | Rancher | Graylog | RabbitMQ | SonarQube | Jenkins

### HSM-Signer Service — PDF/XML Digital Signing Platform

2025

Reduced signing latency by 60% (800ms → 300ms) by redesigning the request processing pipeline for a PKCS#11-backed HSM platform. Increased throughput by ~60% by introducing asynchronous queue-based architecture handling 10K+ daily signing/verification operations. Reduced incident resolution time by ~40% via end-to-end request tracing (X-Request-ID) across all API operations. Delivered XML (XAdES) and PDF (PAdES) signing with KamuSM-compliant secure key management; containerized with Docker for high-availability deployment.

Java | Spring Boot | Docker | PKCS#11 | REST APIs

### Natro — Domain & Hosting Platform Modernization (10+ Services)

2022 – 2024

Migrated 10+ mission-critical VB.NET services — domain activation, hosting provisioning, payment processing, customer management, renewal workflows — to .NET 7 for Turkey's #1 hosting platform serving 300K+ customers and 800K+ domains with 99.9% uptime SLA. Reduced production error rates by ~45%, improved API response times by ~30%, and cut incident detection time by ~50% across all migrated services. Expanded structured logging across entire service layer; integrated Sentry for real-time alerting, enabling proactive issue resolution before customer impact.

.NET 7 | ASP.NET Core | MSSQL | Sentry

### Octapull — Real-Time Video Collaboration Platform

2020 – 2022

Reduced latency by ~25% and improved operational efficiency by ~35% on a platform supporting 1,000+ concurrent users. Validated 100-participant simultaneous sessions with screen sharing, enabling production-scale deployment.

Jitsi Meet | .NET (C#) | ASP.NET MVC | JavaScript | Docker | GitLab CI | Graylog

## EDUCATION & CERTIFICATIONS

### Bachelor of Engineering, Computer Engineering

2021

Karabuk University

### CKA — Certified Kubernetes Administrator In Progress

2025

Cloud Native Computing Foundation (CNCF)