

MAGNAIBAYAR GANZORIG

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SUMMARY

Senior Software Engineer with 14 years of experience building national-scale financial systems, including a stock exchange trading platform scaled from 60 to 1,000 RPS at 99.99% uptime. Deep expertise in Go, Java, NodeJS, Kubernetes, PostgreSQL, and identity & access management (SSO, OAuth2, RBAC). Currently pursuing an M.S. in Cybersecurity Management, combining hands-on infrastructure engineering depth with security architecture and applied AI experience. Authorized for internships via CPT.

FEATURED PROJECTS

y5s.tech — AI-Powered Codebase Knowledge Management Platform (Creator, Solo Developer) — 03/2026 – Present

- Designed and built an AI-based knowledge management platform that indexes codebases and lets engineering teams query architectural and business context via LLM-powered retrieval (RAG).
- Developed an MCP (Model Context Protocol) server integration enabling AI assistants to query indexed repositories directly from development workflows.
- Own the full product lifecycle solo: architecture, backend, AI pipeline, infrastructure, and go-to-market.

BurenScore — Mongolian National Credit Bureau Platform (Solution Architect, Lead Engineer) — 2022 – 2024

- Led the end-to-end modernization of a legacy credit bureau system into a micro-services architecture, directing all phases from design through production rollout.
- Designed the technology solution that enabled a 10x increase in business revenue by scaling credit report inquiry and data submission capacity.
- Executed the migration to the new platform with near-zero downtime for a nationally critical financial service.
- Tech stack: Spring Boot, PostgreSQL, Apache Kafka, Redis, MinIO, Kubernetes (microservices).

WORK EXPERIENCE

Senior Software Engineer — Agis Insurance LLC, Ulaanbaatar, Mongolia 02/2026 – 08/2026

- Led applied AI initiatives modernizing and automating core insurance business processes across the enterprise platform.
- Designed identity and access management architecture (SSO/IAM) enforcing least-privilege, role-based access control across internal platforms, unifying authentication for 250+ protected API routes.
- Implemented core financial accounting concepts (accounts payable and receivable) in Go and PostgreSQL, applying them to insurance contract premium management.
- Built internal enterprise systems covering financial accounts payable and receivable workflows using Go, Next.js, and PostgreSQL.

Tech Lead — AILAB LLC, Ulaanbaatar, Mongolia 07/2025 – 02/2026

- Drove infrastructure modernization through Infrastructure-as-Code (Pulumi), standardizing deployment practices organization-wide.
- Designed and implemented quality assurance programs, introducing automated testing frameworks across engineering teams.
- Delivered hands-on training to 30+ engineers on IaC, testing strategy, and DevOps practices; mentored teams on architectural standards and CI/CD best practices.

Senior Full-Stack Engineer — Coperniq LLC, San Francisco, USA (remote) 06/2024 – 02/2025

- Engineered scalable backend microservices with NestJS and PostgreSQL for a US-based SaaS platform, collaborating across distributed agile teams in multiple time zones.
- Optimized database connection pooling across distributed services through R&D on AWS RDS Proxy and PgBouncer.

- Integrated New Relic APM for full-stack observability, performance monitoring, and error tracking.
- Implemented real-time features using Centrifugo WebSocket infrastructure with PostgreSQL logical replication.

Team Lead & Solution Architect — AILAB LLC, Ulaanbaatar, Mongolia 06/2019 – 02/2025

- Directed a team of 10 developers across two squads, delivering multiple enterprise-grade financial systems from inception to deployment.
- Architected and launched the national Stock Exchange Trading Platform (trade.icapital.mn), scaling throughput from 60 to 1,000 RPS while maintaining 99.99% uptime SLA.
- Developed FIX/FAST protocol clients in Go for real-time market data retrieval and order routing over TCP/UDP.
- Designed low-latency WebSocket infrastructure (Centrifugo) enabling real-time, event-driven data flows across all trading modules.
- Built high-performance OHLC trading charts integrating InfluxDB time-series storage with TradingView visualization.

Senior Backend Developer — Gerege Systems LLC, Ulaanbaatar, Mongolia [05/2017 – 12/2018]

- Led the backend development team, owning architectural decisions and delivery of enterprise web systems.
- Mentored junior developers and established standardized coding practices and code review processes.

Web Developer — Metatech LLC, Ulaanbaatar, Mongolia [07/2013 – 04/2017]

- Developed and maintained full-stack web applications using PHP and JavaScript across client projects in diverse industries.

EDUCATION

M.S., Cybersecurity Management — University of Fairfax, Virginia, USA Expected 2028

B.S., Software Engineering — National University of Mongolia 2014 – 2018

Diploma, Project Management — International University of Ulaanbaatar 2013 – 2014

SKILLS

Languages: Go, TypeScript/Node.js, Python, Java, PHP, SQL

Backend & Architecture: Microservices, Event-Driven Architecture, CQRS, REST/GraphQL, gRPC, NestJS, Gin/GORM, Spring Boot

Infrastructure & DevOps: Kubernetes (K3s), Docker, Pulumi (IaC), GitLab CI / GitHub Actions, Linux, Cloudflare, Tailscale

Security & IAM: OAuth2/OIDC, JWT, SSO (Keycloak, Casdoor), RBAC (Casbin), AES-256-GCM encryption, HashiCorp Vault

Databases & Messaging: PostgreSQL, Redis/Valkey, MongoDB, InfluxDB, Elasticsearch, Apache Kafka, NATS JetStream

AI / ML: LLM integration, RAG pipelines, vector databases (Qdrant, pgvector), MCP servers

Observability & Testing: New Relic APM, structured logging, distributed tracing, Testcontainers, Jest, JUnit, Locust

LANGUAGES

English (Fluent) • Mongolian (Native)