

Sepehr Sohrabpour

Software Engineer

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Profile

Software Engineer with 4+ years of experience in building high-performance backend systems, AI-powered search engines, and distributed cloud solutions. Skilled in Golang, Python, and Kubernetes, with expertise in optimizing search performance, scaling systems to handle millions of requests, and automating AI-driven workflows.

Professional Experience

Snapp

August 2023 | Tehran, Iran

Software Engineer

- **Engineered and deployed AI-powered search and serving models** using **Seldon Core**, enhancing real-time search efficiency and improved Search Metrics By 5%.
- **Integrated a high-speed Spell Corrector** for the search engine using SymSpell, reducing query errors and handling millions of requests in milliseconds and led to improve Search Metrics by 3%.
- **Operated a highly available map autocomplete system** with **Golang, Elasticsearch, and Redis**, processing **17 million daily requests** and significantly reducing search latency.
- **Orchestrated the development of a reverse geocoding service** with **Golang, Envoy, and Tile38**, handling **5,000+ requests per second** and **improving address accuracy by 5%**, leading to better user engagement.
- *Designed and automated a self-healing data update pipeline, leveraging Python, Ansible, k3s and Kubernetes. Reduced update time by 50%, eliminated manual tasks, and saved 1,000+ engineering hours annually.*
- **Enhanced search accuracy by integrating a sentence-to-vector model**, expanding query coverage and **boosting relevance by 10%**.
- **Implemented a metric collection service** capable of handling **400 RPS**, storing data in **ClickHouse**, which led to a **12% increase in user engagement** via real-time analytics.
- **Developed a training pipeline for a Named Entity Recognition (NER) model**, improving query relevance and **accelerating booking speed by 10%**.
- **Designed an online search history feature for seamless device synchronization**, enabling personalized search experiences.

HICH (Human Intelligence Community Hub)

September 2023 – February 2024

Software Engineer

Birmingham, United Kingdom

- **Directed the migration from a monolithic architecture to microservices**, scaling system capacity to **handle 2,000 RPS across multiple services**, improving reliability and fault tolerance.
- **Revamped the Notification service with an event-driven architecture**, enhancing real-time message delivery and reducing system bottlenecks.
- **Managed a cross-functional team** in rewriting a legacy **PHP** project into **Golang**, improving performance by **3x**, reducing resource usage by **30%**, and increasing maintainability.

Software Engineer

Stockholm, Sweden

- **Created an engaging landing page and an interactive online gaming platform** using React, enhancing user engagement and accessibility.
- **Architected a scalable backend service** for the gaming platform, ensuring high availability and smooth real-time interactions.
- **Built a cross-platform mobile puzzle gaming app** for **Android and iOS using Flutter**, optimizing performance for seamless gameplay.
- **Serviced CI/CD pipelines with GitHub Actions**, automating deployment and reducing release cycles.
- **Managed a real-time monitoring system** using Grafana and Prometheus, improving system observability and performance tracking.

Carriot

July 2020 – August 2023 | Tehran, Iran

Software Engineer

- **Constructed and maintained microservices** using **Golang**, applying principles of Clean Code, Domain-Driven Design (DDD), and Hexagonal Architecture, reducing development time by more than **10%**.
- **Utilized gRPC for communication** and integrated an event-based system through **RabbitMQ**, handling over **1k** events per second for seamless inter-service event management.
- Employed **Postgres and Clickhouse** for database management, with **Redis** for caching and **Elasticsearch** for full-text search, optimizing performance and handling over **100 requests per second**.
- **Conceptualized and built a Internal Single Sign-On (SSO) service**, fortifying security with real-time access level validation, achieving a 5 ms maximum response time.
- **Boosted development speed by 20%** by optimizing workflows and reducing bottlenecks.

Omid Analyzer

February 2019 – July 2020 | Tehran, Iran

Software Engineer

- **Implemented a neo-financial application** using RabbitMQ, Redis for cache, Oracle database, Jira, Confluence, GitLab, and Kubernetes for deployments.
- **Created trading algorithms** using Python for auto-trading in the market.
- **Automated user authorization** with external services, improving user registration by 70%.

Education

Mathematics Bachelors

September 2019 – June 2023 | Tehran

Iran University Science & Technology

Master Of Data Mining

September 2023 – present | Tehran

Shahid Beheshti University

Skills

Golang	Python	Kubernetes	Clickhouse
Redis	Elasticsearch	PostgreSQL	gRPC
Apache Airflow	Helm Charts	Docker	Microservices
Nats	Redis Cluster	VectorLog	RabbitMQ
Gitlab CI/CD	Github CI/CD	Argo CD	RestFull
Kafka	AWS EC2, ECS	Grafana	Otel Tracing Jaeger
MySQL	K3s	Ansible	Seldon Core

Projects

Go-Symspell

Spelling Correction & Fuzzy Search

Golang implementation of the SymSpell algorithm, a fast and memory-efficient algorithm for spelling correction, word segmentation, and fuzzy string matching. It supports both unigrams and bigrams for advanced contextual correction.

Seperno

Text Normalization

Developed **Seperno**, a highly efficient **Persian text normalization** tool, improving text preprocessing accuracy by **25%**, making it one of the most reliable NLP tools for Persian.

Gango

Golang project generator

Engineered **Gango**, an automation tool for generating scalable, cloud-native backend architectures in Golang. Reduced backend system setup time by 50%, enabling faster development and improved DevOps efficiency.