

## Contact

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summarykarim (LinkedIn)

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## Top Skills

Machine Learning

Large Language Models (LLM)

MLOps

## Certifications

Certified ScrumMaster® (CSM®)

Certified Terraform Associate

Deep Learning Nanodegree  
Foundation

# Karim MD

Technical Lead | GenAI & Cloud-Native AI/ML | Architecting Large Scale Systems in EV, 5G, and Secure OS.

Tampere, Pirkanmaa, Finland

## Summary

I love large scale systems, from architecture to construction to operations.

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## Experience

### Unikie

Technical Lead, AI

2020 - Present (6 years)

Tampere

- Built and shipped AI-powered developer tools (code review, release notes, documentation) using LLMs, PyTorch, and LangChain! integrated end to end into React-based internal platform with REST APIs.
- Built MLOps infrastructure on AWS/Kubernetes for model training, versioning, and deployment; reduced ML release cycles by 60% with reproducible CI/CD pipelines.
- Built full-stack e-learning platform (Sanoma Learning) with React.js, TypeScript, Django, and PostgreSQL! owned AI features from model through backend API to frontend UI
- Designed a microservices platform processing 500,000+ daily API requests with high availability and fault tolerance
- Developed AI-powered developer tools using LLMs, PyTorch, and LangChain, automating code review, documentation, and release notes
- Built full-stack e-learning platform (Sanoma Learning) with React.js, Django, and PostgreSQL
- Implemented IaC with Terraform and GitOps, reducing provisioning time from days to hours with 100% environment reproducibility
- Designed secure RESTful APIs with OAuth2/JWT, rate limiting, and observability via Prometheus and Grafana

### Cybersecurity Research Institute (via Unikie)

Platform Engineer & Release Lead (Ghaf)

October 2023 - 2026 (3 years)

Dubai, United Arab Emirates

- Built secure AI/ML pipelines with model signing, SBOM generation, and supply-chain trust for embedded systems
- Led release engineering transformation for embedded virtualization framework; reduced release cycle from 2 weeks to 2 days (80%) via Jenkins and GitOps automation
- Architected GPU-orchestrated Kubernetes infrastructure for LLM and foundation model training on embedded-grade hardware
- Built secure AI/ML pipelines with model signing and SBOM generation for supply-chain trust and compliance in embedded systems
- Mentored 13 engineers on cloud-native technologies, Kubernetes orchestration, container management, and embedded Linux best practices
- Designed real-time monitoring and alerting platform using Prometheus and Grafana for system observability and incident response across distributed embedded nodes

## Nokia

### Devops Engineering Consultant (5G Infrastructure)

November 2022 - October 2023 (1 year)

Tampere

- Designed enterprise CI/CD pipelines for 5G core network infrastructure across 20+ global regions, integrating embedded network functions with cloud-native orchestration
- Built end-to-end monitoring, alerting, and log aggregation platform using Prometheus, Grafana, and ELK Stack for distributed telecom systems
- Automated cloud infrastructure provisioning on AWS using Terraform and Ansible, cutting environment setup time from days to hours with full reproducibility

## Leading Electric Vehicle (EV) Manufacturer (via Unieke)

### Senior Software Engineer (OTA)

August 2021 - November 2022 (1 year 4 months)

United States

- Developed end-to-end OTA firmware delivery infrastructure for 100K+ connected vehicles, orchestrating secure firmware distribution, delta updates, and rollback mechanisms across a globally distributed fleet.
- Built real-time fleet observability platform and custom WebSocket pipelines, providing live visibility into firmware rollout progression, ECU health telemetry, and deployment anomaly detection across vehicle hardware variants

- Designed event-driven, fault-tolerant notification architecture using Kafka, AWS SNS/SQS, and dead-letter queues, enabling sub-second alerting on deployment failures, automatic rollback triggers, and campaign-level update lifecycle tracking
- Built high-throughput RESTful APIs with OAuth2/JWT authentication, rate limiting, and RBAC to manage vehicle firmware versioning, fleet segmentation policies, and update campaign scheduling and handling 50K+ daily API requests with sub-200ms p95 latency

## Huawei

### Software Engineering, AI & NLP (Search)

February 2020 - August 2021 (1 year 7 months)

Helsinki Metropolitan Area

- Built and scaled Product-focused distributed search platform serving 25M+ MAU with sub-100ms p99 latency across multiple geographies
- Built end-to-end full-stack semantic search platform with NLP-based query understanding, ranking pipelines, APIs, and interactive search interfaces
- Designed and implemented RAG architecture with embedding pipelines, vector databases, retrieval orchestration, and conversational UI experiences
- Deployed recommendation and personalization pipelines processing 50M+ monthly queries with real-time targeting
- Designed RAG pipeline with embedding, vector search, and grounded response generation

## CSIT Finland Oy

### Software Engineer

January 2019 - February 2020 (1 year 2 months)

Helsinki, Uusimaa, Finland

- Developed Cross-functional Identity and Access Management (IAM) platform serving healthcare, education and public sector clients, enabling secure lifecycle management of digital identities across thousands of users and connected systems.
- Built Single Sign-On (SSO) integration layer connecting IAM platform with enterprise applications, mobile devices, and IoT endpoints, enabling seamless and secure cross-system authentication for healthcare and public-sector.
- Designed and implemented RESTful APIs with OAuth2/OIDC and JWT-based authentication.

- Developed scalable frontend and backend components for enterprise access management, including MFA flows, SSO configuration portals, and user provisioning systems.

## Dcard

### Software Engineer (Backend)

January 2016 - December 2018 (3 years)

Taipei City, Taiwan

- Developed and maintained backend services for Taiwan's largest anonymous social networking platform, serving 15M+ monthly unique visitors and processing 1.5B+ monthly page views with sub-100ms response times.
- Designed and implemented rate limiting, abuse detection, and anti-spam middleware to protect API endpoints from malicious traffic, reducing fraudulent account creation and content manipulation at scale
- Built and optimized high-throughput RESTful APIs powering real-time content delivery, user matching ("Friend of the Day"), discussion forums, and notification systems across web and mobile clients

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## Education

### Harvard Business School Online

Post-secondary, AI, Leadership

### Centria University of Applied Sciences

MSC, Mathematics and Computer Science