

# Nikolaos Tzagkarakis

📍 Athens, Greece | ✉ [tzagkarakis.nik@gmail.com](mailto:tzagkarakis.nik@gmail.com) | [in linkedin.com/in/nikos-tzagkarakis](https://www.linkedin.com/in/nikos-tzagkarakis) | 📞 +30 695 775 5058

## Summary

Senior Software Engineer and Tech Team Lead with 6+ years of experience designing and scaling production-grade IoT systems and data platforms. Deep expertise in software architecture, backend development, and DevOps, with a focus on reliability and maintainability.

## Experience

### Lead Software Engineer

WINGS ICT Solutions, Athens, Greece

Oct 2024 – Present

- Defined system architecture and technical direction for production IoT platforms serving industrial and government clients
- Architected sensor data platform processing 10M+ daily data points, reducing ingestion latency from minutes to seconds
- Built industrial pump monitoring system for EYATH Greece integrating tilt, vibration, and energy sensors with OPC-UA data, enabling anomaly detection and early failure warnings
- Automated CI/CD pipelines with Docker and Ansible, enabling zero-touch deployments from merged commits

### Software Engineer (Military Service, concurrent)

Hellenic National Defence General Staff, Athens, Greece

Mar 2024 – Oct 2024

- Architected high-throughput data collection backend using Python and Elasticsearch, ingesting 500K+ daily records for threat intelligence

### Solution Engineer

WINGS ICT Solutions, Athens, Greece

Mar 2021 – Oct 2024

- Architected WebRTC video streaming platform for bus lane enforcement, processing 50 concurrent streams in pilot with architecture designed to scale to 600
- Engineered async UDP server handling 1000+ concurrent connections in Python, later ported to Rust for improved performance
- Designed GraphQL ETL pipeline that synchronizes 18,000+ groundwater wells into a SensorThings-compliant database with batch processing
- Created multi-tenant deployment automation with Ansible, enabling single-command provisioning of isolated client environments

### Research Associate

Distributed Systems Laboratory (EPISEY), NTUA, Athens, Greece

Sept 2019 – Feb 2021

- Built real-time UAV fire detection system processing live video streams through ML models, enabling early wildfire warning alerts
- Developed BI dashboards using Python visualization libraries, automating data aggregation for EU-funded research projects
- Designed PostgreSQL and MongoDB databases for research data management across multiple European institutions

## Skills

**Languages:** Python, Rust, Go, JavaScript, TypeScript, SQL

**Data:** PostgreSQL, TimescaleDB, Redis, GraphQL, REST APIs, MQTT, WebRTC

**Infrastructure:** Kubernetes, Docker, Ansible, Git, CI/CD, Prometheus, Grafana

## Certifications

**Kubernetes and Cloud Native Associate (KCNA)** — Linux Foundation / CNCF

Jul 2026

## Education

**M.Sc. in Data Science and Machine Learning**

National Technical University of Athens (NTUA)

2021

**Diploma in Electrical and Computer Engineering**

National Technical University of Athens (NTUA)

2019

**Languages:** Greek (Native), English (C2 Proficiency)