

# MELIH COLPAN

## Senior Software Engineer — Backend, Cloud & AI

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### SUMMARY

Hands-on software engineer with **15+ years** building dependable backends, REST APIs, cloud infrastructure and AI-driven systems in **Python**. Deep in **event-driven and microservices architectures** (Kafka, RabbitMQ), high-throughput data pipelines, and shipping products end to end across web and mobile. Comfortable owning systems from design through production and scaling. BEng in Electronics & Communication Engineering.

### SKILLS

<b>Languages:</b>	Python, SQL, JavaScript, TypeScript, Java, HTML, CSS, Bash
<b>Backend &amp; APIs:</b>	Django, FastAPI, Flask, aiohttp, asyncio, Celery, SQLAlchemy, Node.js, Prisma, REST API / RESTful API design, OpenAPI/Swagger, WebSockets, microservices architecture, event-driven architecture, distributed systems
<b>Messaging &amp; Data:</b>	Kafka, RabbitMQ, MQTT concepts; data pipelines, web crawling (Scrapy), Pandas, NumPy, satellite & geospatial data (GeoJSON, remote sensing), <b>LLM integration (OpenAI, Anthropic &amp; Gemini APIs)</b> , vector search (pgvector), embeddings & RAG, computer vision
<b>Databases:</b>	PostgreSQL, MySQL, Redis, Amazon DynamoDB, Elasticsearch, schema migrations (Alembic, Prisma)
<b>Cloud &amp; Serverless:</b>	AWS (EC2, ECS, RDS, S3, SES, ElastiCache, Route 53, CloudWatch, AppRunner) · GCP (Cloud Run, Cloud Build, Compute Engine, Cloud SQL, Cloud Storage, App Engine, Cloud Monitoring) · serverless architecture
<b>DevOps:</b>	Docker, Docker Compose, Docker Swarm, Kubernetes, CI/CD (GitHub Actions, GitLab CI, Jenkins), NGINX, Linux (Ubuntu, Debian), observability (Prometheus, Grafana), monitoring & alerting
<b>Mobile &amp; Integrations:</b>	iOS (Swift), Android (Java), App Store & Play Store delivery, in-app purchases (RevenueCat), Twilio, SendGrid, Amazon SES, Firebase
<b>AI-Assisted Dev:</b>	Production delivery across <b>React, Next.js, TypeScript, Tailwind CSS, Node.js, Prisma and Swift</b> using AI coding tools — architecture and review owned hands-on, implementation AI-accelerated
<b>Published iOS Apps:</b>	<a href="#">Planiva</a> (productivity), <a href="#">iyizen</a> (fitness), <a href="#">Wandora</a> (travel) — native Swift apps, built end to end
<b>Open Source:</b>	<b>MuscleMap</b> — Swift library, 180+ stars · <b>flask-restful-login</b> — 120+ stars · 300+ stars total ( <a href="https://github.com/melihcolpan">github.com/melihcolpan</a> )
<b>Practices:</b>	System design, software architecture, automated testing (pytest), Agile/Scrum, code review, technical mentoring, product development lifecycle

### EXPERIENCE

#### Tech Lead — Mat Sportive Inc.

Sep 2024 – Present

San Francisco, CA · Remote · Sports technology

- Build backend services and REST APIs for a multi-tenant gym & studio automation platform serving **20,000+ members across 3 branches** — **Next.js, TypeScript, Prisma, PostgreSQL** on GCP — with branch-scoped role-based access control, memberships, class & PT scheduling, credit/billing and payment integration.
- Engineered production **AI features**: an **LLM support assistant** that auto-drafts replies with intent classification over a **pgvector** embedding knowledge base (RAG), and a member value/risk-scoring engine; built real-time WebSocket notifications and AWS/Firebase delivery pipelines.

#### Software Architect (Contract) — Momentup Development Company

Sep 2025 – Dec 2025

Project-based engagement · Construction technology

- Architected and built **RemoteSite** for Arventek: a cloud construction-analytics platform with 3D digital twins, aerial mapping and AI-driven progress, quality and budget tracking. Delivered end to end and handed over.

## Senior Software Engineer — Urban Active

Apr 2022 – Sep 2024

Istanbul, Turkey · Remote · Fitness ecosystem (iOS, Android, web)

- Built backend services and REST APIs for a **venture-backed** fitness platform serving **100K+ users worldwide, live-streaming to thousands of concurrent viewers** across time zones.
- Backend in Python (PostgreSQL, DynamoDB, Redis caching); deployed on AWS with Docker; CI/CD with GitHub Actions; integrated Twilio, SendGrid, RevenueCat and store payments.
- Built and shipped the native **iOS (Swift)** and **Android** apps end to end.

## Software Engineer (Contract) — Selvi Technology

Sep 2022 – Mar 2023

Defense technology · AI-based computer vision & GNSS-free visual navigation

- Built computer-vision and visual-navigation software for ground and aerial platforms, fielded in programs at Turkish defense companies (**Havelsan, Meteksan**); also worked on **Aselsan's** MIRSAD surveillance platform.

## Software Engineer → CTO — tarla.io

Jun 2014 – Dec 2022

Ankara, Turkey · formerly ErikTronik · promoted to CTO in 2019

- Shipped **20+ client applications** as an engineer; supervised cloud master/slave server design on Google Compute Engine with NGINX; established CI automation.
- Built a smart-farming platform on a cloud **microservices architecture powering 3+ products and 100+ services** (satellite imagery, weather/storm detection, soil sensors, price indices).
- The same data infrastructure fed mobile apps for **Sekerbank** and **Isbank** (two of Turkey's largest banks), **TARSIM's** state crop-insurance satellite project, and platforms for **Tekfen Holding** and **Konya Seker** — 20+ companies.
- Tech: Python, Flask, aiohttp, PostgreSQL, Redis, Docker Swarm, Google Cloud, GitLab CI, RabbitMQ, NGINX.

## Software Engineer — Artistanbul

Jan 2020 – Jun 2020

Istanbul, Turkey · Education technology & free software

- Built custom e-learning solutions on the **Open edX** platform with Python/Django on Linux; contributed to open-source projects.

## Software Engineer — meteoblue AG

Aug 2015 – Oct 2015

Basel, Switzerland

- Built the company's first Android application end to end (Java, Android Studio, Material Design).

## Network Operator — Suleyman Demirel University

Sep 2011 – Sep 2013

Isparta, Turkey · Campus-wide network operations

- VLAN design and routing across Cisco, Huawei and HP; eduroam & Wi-Fi infrastructure; network security and troubleshooting.

## ENTREPRENEURIAL EXPERIENCE

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### Founder / Co-Founder — UIGEO · iklim.co · OPIA Group

2017 – 2025

- Founded and co-founded three software ventures: **UIGEO** — geospatial & weather data APIs (2023–2025); **iklim.co** — storm-intelligence for insurers (2017–2025); **OPIA Group** — software consultancy (2020–2025).
- iklim.co's platform was trusted by insurers including **AXA** and **Allianz** (one alone monitored **300K+ customers**); served agriculture, insurance and energy clients via RESTful data APIs.

## AWARDS & HONORS

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**2020** The FoodTech 500 — Most Innovative Global Agriculture & Food Initiatives

**2018** Zurich Insurance World Innovation Competition — Region Winner

**2017** United Nations Data for Climate Action — Data Visualization Champion

**2016** Web Summit Lisbon — Machine Demo Finalist

**2015** Eurocloud — Europe's Best Cloud Service

**2015** IBM SmartCamp Istanbul — The Best Second Innovation

Selected from **18 international awards & honors** (2015–2020) — full list at [melihcolpan.com](http://melihcolpan.com).

## EDUCATION

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**Suleyman Demirel University** — BEng, Electronics & Communication Engineering

**Politechnika Lubelska, Poland** — Electrical Engineering & Computer Science (one-year exchange)

Languages: English (professional), Turkish (native)