Mert Peker

Software Engineer

mert.peker@yahoo.com TR +90 555 554 9892
github.com/flamertt linkedin.com/in/mertpeker

Work Experience

Software Engineer, TwinUp – Digital Twin Technologies 2024 – Present

- **Clavus:** Contributed to the development of a smart city platform built on 70+ microservices that enables municipalities to manage earthquake, air quality, camera, waste, transportation and energy data on a 3D city map.
- **Omni AI:** Contributed to the development of an enterprise AI platform that works with organizations' own data, consisting of 9 modules including a chat assistant, report and presentation generation, translation, and voice and coding assistants. Worked on the platform's web interface, admin panel, the Omni Coder IDE and the Omni Flow automation templates website.
- **Tengine:** Developed a digital twin platform that models urban traffic and air quality together. Using a traffic simulation calibrated with real vehicle speeds, the platform enables testing scenarios such as road closures and signal timing changes, and forecasts air pollution.
- **EcoTwin:** Developed a digital-twin-based multimodal transportation management platform aimed at increasing micromobility usage. The platform combines cycling, public transit and pedestrian movements with vehicle speeds, trip flows, bicycle counters and population data in a 3D city model to deliver insights for transportation planning.
- **Call Center AI:** Contributed to the development of a call center platform for Sifiraracal.com that makes automated phone calls with AI voice agents and manages scheduled and bulk calls, call recordings and reports.
- **TwinUp Portal:** Developed a portal for monitoring and managing the servers, services, alerts and reports of digital twin projects deployed for municipalities from a single dashboard.
- **TwinUp Corporate Website:** Developed the company's corporate website, which presents its products through 3D city tours and showcases of fire truck, tram and bus training simulators.

Projects

- **isometricberlin.com:** An interactive isometric 3D map of inner Berlin around the S-Bahn Ring. It shows buildings with their real roof shapes, aerial imagery and Berlin-style facades, street and park trees, and moving traffic and public transport (bus, tram, S-Bahn, U-Bahn). The map follows Berlin's local time, switching between day and night views.

Technologies

Backend: Go, Rust, Python (FastAPI), Node.js, Microservices, REST, WebSocket, MQTT

Frontend: React, TypeScript, React Native, Tauri, Redux, Zustand, Tailwind CSS

Databases & Storage: PostgreSQL/PostGIS, MongoDB, Redis, ClickHouse, Elasticsearch, MinIO

DevOps: Docker, Kubernetes, Nginx, Prometheus

3D & Mapping: Three.js, MapLibre GL, SUMO

AI: AI Agents, RAG, LangChain, ElevenLabs, LSTM

Education

B.Sc. in Computer Engineering, Konya Technical University 2022 – 2026

Communities: Computer Science Club, Theatre Club, Music Club

References

Melih Ayyıldız, Senior Software Engineer, Trendyol Group Berlin

Yusuf Çırak, Software Engineer, Eczacıbaşı – X AI