Saltuk Buğra ÖZELGÜL

SOFTWARE ENGINEER

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Personal Profile

Backend-oriented software engineer with experience designing secure, scalable systems using **Python**, **FastAPI**, **Django**, **PostgreSQL**, **Redis**, and **Celery**. Experienced in asynchronous workflows, REST APIs, WebSocket-based communication, and full deployment pipelines including **AWS** and **Cloudflare Workers**. Strong foundation in networking protocols (**SNMP**, **LLDP**, **CDP**) adds to backend versatility. Passionate about performance optimization and backend-first architecture for web and mobile.

Work Experience

Rakort
Ankara, Turkey

Software Developer
Jan 2024 - Ongoing

- Led backend transformation of **FastNAC**, a mission-critical network access control system deployed across Turkey's largest government institutions including the Ministry of Defense, General Directorate of Highways, and State Supply Office, managing enterprise networks with **thousands of endpoints**.
- Architected migration from monolithic to **microservice-based** architecture using **FastAPI**, significantly improving system responsiveness and scalability for high-availability government infrastructure.
- Engineered **custom pagination engine for raw SQL** workflows, achieving 3x performance improvement on critical data-fetch endpoints serving large-scale network monitoring operations.
- Modernized legacy Python 2.x codebase to Python 3.11 and **optimized database queries and background tasks**, reducing backend CPU usage by significant margins across production environments.
- Managed system administration on **Linux/Debian** servers in enterprise environments, handling service management, performance monitoring, and infrastructure optimization for mission-critical systems.

Projects

Moviote

Fullstack Mobile Application
January 2023 – Ongoing

- Designed and developed the backend for **Moviote**, a cross-platform mobile app for creating and sharing movie lists, with social and real-time interaction features. Implemented real-time **mini-games** using **WebSockets**, and managed background processing via **Celery**.
- Built a sophisticated **similarity algorithm** using **cosine similarity** to calculate compatibility scores between user profiles based on movie preferences, enabling personalized recommendations and enhanced social matching features.
- Deployed and maintained core backend infrastructure including **Django**, **PostgreSQL**, **Redis**, and integrated monitoring tools like **CloudWatch** on **AWS**. Ensured system reliability and scalability for a production environment.
- Preview at: www.moviote.com

WP Recap

Backend & Analytics Platform
January 2024 - April 2024

- Developed the backend infrastructure for **WP Recap**, a WhatsApp chat analysis platform. Built scalable data processing pipelines using **Cloudflare Workers** to analyze chat histories and generate user insights with real-time analytics.
- Implemented comprehensive monitoring and analytics infrastructure using **Sentry** for error tracking, **Smartlook** for user behavior analysis, and **Google Analytics** for usage metrics. Architected data storage solutions with **Realm** for efficient local data management.
- Backend successfully handled traffic scaling from **10K daily users** to **500-1000 concurrent active users**, with the app ranking top #20 in App Store (Lifestyle) category within the first week.
- Check it out on https://apps.apple.com/tr/app/id6740404126

Education

Gazi University
Ankara, Turkey

BSc in Computer Engineering
Sept 2019 - July 2024

- GPA: 3.78
- 3rd in the department

Publications

JOURNAL ARTICLES

Anomaly Detection on Servers Using Log Analysis
Mert İnan Saygılı, Saltuk Buğra Özelgül, İlkay Samet Öztürk, Kevser Özdem Karaca, A. Orkun Gedik, M. Ali Akcayol
2024 8th International Artificial Intelligence and Data Processing Symposium (IDAP), 2024