

MUSTAFA DEĞER GÖKALP

Full-Stack Software Developer & AWS Certified Solutions Specialist

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EDUCATION

ISTANBUL MEF UNIVERSITY

Bachelor, Computer Engineering

Turkey | 2021 - 2024

Capstone Project:

Enhancing Parallelism in Sparse Triangular Solve (SpTRSV) Computations Using Reinforcement Learning

- Developed an innovative graph transformation strategy to significantly enhance the parallelism in SpTRSV computations.
- Utilized Reinforcement Learning techniques to modify the dependency graph of sparse matrices, leading to improved parallel execution.
- Achieved TÜBİTAK approval for the project's approach and potential impact on computational efficiency.

EASTERN MEDITERRANEAN UNIVERSITY

Bachelor, Computer Engineering

Turkish Republic of Northern Cyprus | 2020 - 2021

Commenced studies in Computer Engineering at Eastern Mediterranean University and transferred to MEF University after the first year

Expertise

AI & Reinforcement Learning

- Developed RL-based solutions for **dynamic graph and sparse matrix parallelization**, optimizing computational performance.
- Designed **Text-to-Speech (TTS)** and **Speech-to-Text (STT)** systems using **AWS Polly**, **AWS Transcribe**, **Eleven Labs**, and **OpenAI models**, enabling user interaction with GPT-powered applications.
- Built AI agents across different domains, each running parallel workflows to handle natural language tasks, coordinate execution, and merge results—boosting speed and scalability for complex use cases.

Full-Stack Development & Web Applications

- Proficient in backend and frontend development
- Designed and deployed scalable web applications with intuitive user interfaces and robust APIs.
- Experience in API development and integration with cloud-based solutions for seamless client interactions.

AWS Cloud Infrastructure & Software Design

- Designed and optimized cloud architectures to enhance scalability, reliability, and cost efficiency.
- Led projects to reduce infrastructure costs, improve scalability, and high availability with serverless and containerized solutions.
- Expertise in Well-Architected Frameworks, cloud-native development, and hybrid cloud technologies.

Client Management & Collaboration

- Delivered custom solutions to meet diverse client needs, having a high success rate in client satisfaction.
- Collaborated cross-functionally with teams, ensuring smooth communication and alignment on project goals.
- Led Agile-based sprints, backlog reviews, and ensured on-time delivery of high-quality results.

EXPERIENCE

PARAŞÜT

Mid. Full Stack Software Developer | İstanbul

Nov 2023 - Present

Full Stack Developer building and integrating backend and frontend services. Cut AWS expenses by 75% and integrated cloud systems into Paraşüt for smoother workflows and GIB compliance. Currently developing AI agents with parallel workflows to scale natural language tasks. Also assist in cross-team collaboration and client issue resolution.

Key Responsibilities:

- **Full-Stack Development:**
Built and maintained backend and frontend systems, delivering responsive, high-performance applications.
- **AWS Architecture & Optimization:**
Designed and deployed scalable serverless solutions using AWS Lambda (Node.js, Python), improving performance and reducing infrastructure costs.
- **AI Reporting Agent Development:**
Working on an AI reporting agent capable of running parallel workflows. Created agent definitions within the Paraşüt app, and developed tools based on database schema analysis to automate insights and reporting.
- **Cost Optimization:**
Cut AWS services costs by 75% through lifecycle policies and efficient data management strategies.
- **Cross-Team Collaboration:**
Coordinated with PMs, designers, and developers in Agile workflows—contributing to planning, stand-ups, and retrospectives.
- **Sprint & Backlog Management:**
Analyzed and prioritized tasks, ensuring alignment with project goals and maintaining code quality through regular review.

AUTHRION

Full Stack App Developer & Trading Domain Expert | Switzerland

Oct 2024 - July 2025

At Authrion, I led the development of Pulsar, a full-stack trading platform for managing sessions, real-time alerts, and in-depth analytics. Designed for scalability and automation, it supports growing user demand with high performance. The platform also features a backtesting lab that runs 20,000+ strategy bundles in parallel using Docker to identify top-performing setups. I built the entire architecture, microservices across three independently deployed repos.

Key Responsibilities:

- **Full-Stack Development:**
 - Designed and implemented the Pulsar platform using Flask and React, delivering a modular, microservices-based trading application.
- **System Architecture & Deployment:**
 - Built the backend infrastructure using Docker and AWS services, ensuring scalability and fault tolerance. Managed three separate deployment pipelines across independent repositories.
- **Backtesting Infrastructure:**
 - Developed a backtesting engine that runs 20,000+ strategy bundles in parallel using Docker containers to identify optimal configurations.
- **End-to-End Product Ownership:**
 - Handled all phases of development including database design, API development, infrastructure planning, UI/UX collaboration, and sprint execution.
- **User Onboarding & Growth:**
 - Successfully onboarded 7 initial users, with a monthly target of at least 10 new users.

MY TRADING CODER

Full-Stack Software Developer/Project Consultant | United State Sep 2024 - Nov 2024

I designed and built a scalable web app for algorithmic trading, with support for custom strategies, API integration, and broker flexibility. Features include real-time dashboards, backtesting, payments, auth, and a referral system. Launched with Alpaca and onboarded 20 users in the first week, with capacity for 1,000 in the first year.

PROJECTS

Coffee for Notes — AI-Powered Productivity Platform

Full-stack developer • 2025

Description: A React/TypeScript web app for task & note management with Kanban boards, an AI note-taking assistant, planning poker, workflow visualization, team collaboration, and real-time analytics. Built on Supabase (PostgreSQL, Auth, Realtime) with Stripe subscriptions and a modern, animated UI.

Key features: AI chat assistant, voice-to-text notes, Google Calendar sync, multi-workspace support, credit-based AI usage, responsive Tailwind UI.

- **Assistant design (multi-agent, Google ADK):** Orchestrator (routing/policy), **TaskAgent** (create/update/prioritize), **NoteAgent** (summarize → checklist, link related), **ReportingAgent** (KPIs/forecasts; read-only).
- **AI capabilities:** Natural-language commands, meeting notes → action items/owners, backlog triage & due-date suggestions, duplicate/related detection, deadline-risk alerts, daily/weekly digests.
- **RAG retrieval:** Embedding + keyword hybrid search across tasks/notes; cross-linking and inline summaries.
- **Product features:** Kanban boards, planning poker, multi-workspace collaboration, real-time updates, reusable templates, voice-to-text notes.
- **Security & reliability:** RBAC + RLS on Supabase, audit trails; Dockerized FastAPI services with health checks; idempotent background jobs with retry/backoff.
- **Tech:** Python (FastAPI), Google ADK, OpenAI API, React, TypeScript, Tailwind, Supabase/PostgreSQL, Docker, Stripe.

AI Story Creator Platform — Interactive Storytelling with AI & TTS

Full-stack developer • 2025

Description: A full-stack web app that generates interactive stories and expressive audio narrations. Users define genre, tone, length, and perspective; build characters; and export multilingual text + voice outputs. Built on Supabase (PostgreSQL/Auth/Realtime) with serverless Edge Functions and a modern React/TypeScript UI.

Key features: AI story generation, character/relationship system, high-quality ElevenLabs TTS, English/Turkish i18n, media-reference integrations (TMDB/Google Books/RAWG), and audio caching.

- **Gen-AI pipeline:** Prompt templates & system policy; iterative draft → refine → finalize; style/tone/POV controls; safety filtering.
- **Orchestration:** Supabase Edge Functions for low-latency generation; queued TTS jobs; idempotent retries & backoff.
- **Character engine:** Personality traits, arc progress, relationship graph, continuity memory across chapters.
- **TTS & audio:** Voice-selection heuristic (matches genre/age/tone), SSML markup, audio caching/CDN delivery, resumable generation.
- **Product UX:** Scene/chapter editors, timeline navigation, bookmarkable/shareable previews.
- **Security & data:** RLS policies, workspace-level RBAC, audit logs.
- **Integrations:** OpenAI (story/text), ElevenLabs (TTS), TMDB/Google Books/RAWG (inspiration metadata).
- **Tech:** React 18, TypeScript, Vite, Tailwind, Radix UI; Supabase (PostgreSQL, Realtime, Edge Functions).

Certifications

- AWS Certified Security – Specialty SCS-C02; [Amazon Web Services \(2024\)](#)
- AWS Certified Data Engineer – Associate DEA-C01; [Amazon Web Services \(2024\)](#)
- AWS Certified Solutions Architect – Associate SAA-C03; [Amazon Web Services \(2023\)](#)

Language Skills

- Native in Turkish
- Fluent in English

PROFESSIONAL SKILLS

Programming Languages: Python · JavaScript · C · Ruby · Java · Bash/Shell

Web Development: Django · Flask · Ruby on Rails · Node.js · Next.js · Ember.js · HTML/CSS · API design & integration

Databases: PostgreSQL · MySQL · MSSQL · SQLite · MongoDB · DynamoDB · Redis

Cloud Services: AWS · AWS Well-Architected · Cloud-native development · Hybrid cloud · AWS AI services · OpenAI AI services · Automation · Security · Networking · Storage

Development Tools: Git · Docker · Kubernetes · Jenkins · Rancher · PAM · Bugsnag

Agile Methodologies: Scrum

Soft Skills: Analytical thinking · Problem-solving · Communication · Team collaboration · Time management · Adaptability · Leadership · Client relationship management · Attention to detail · Fast learner