

MERT ÇETİN

Çankaya, Ankara

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Middle East Technical University

Civil Engineering (Ended with undergraduate transfer)

September 2018 – June 2022

Ankara

Hacettepe University

Computer Engineering

June 2022 – June 2026

CGPA: 3.19 / 4.00

Technical Skills

- | | | | |
|----------------------|--------------------------|------------------------|--------------------------|
| • React.js / Next.js | • NLP / LLM | • Agent Skills | • Swift, AppKit |
| • TypeScript, Redux | • RAG Systems | • Pinecone, LangChain | • WidgetKit |
| • Python, FastAPI | • Multi-Agent Systems | • OpenAI / Gemini APIs | • Codex App Server |
| • Django, .NET Core | • Model Context Protocol | • PostgreSQL, Supabase | • Docker, GitHub Actions |

Summary

AI Engineer & Full-Stack Software Engineer with professional experience building production-grade web, mobile, and AI-powered systems at companies including **Jotform** and **Mastersoft**. Contributed to **Jotform AI** in a large-scale production environment using **React.js**, **TypeScript**, and **PHP**, while developing LLM-powered features backed by **Gemini** and **OpenAI** models. Specialized in **RAG architectures**, **multi-agent systems**, agent orchestration, context-efficient AI workflows, NLP, vector databases, and full-stack application development with **React.js/Next.js**, **FastAPI**, and **.NET**. Builds and open-sources developer tooling for the AI agent ecosystem, including **Coal**, a local-first coordination layer for parallel Codex sessions; **Research Swarm**, a context-efficient parallel research workflow; and **Ankui**, an inventory and security tool for AI coding agents. Also develops native macOS tools with **Swift**, **AppKit**, and **WidgetKit**, including **Tabbs** and **Codex Limits**. Award-winning competitive programmer with **2nd place at Meta Llama Hackathon 2025** and a **Top 1.6% ranking** in Trendyol's national data science competition.

Experience

Jotform

June 2025 – June 2026

Part-Time Software Engineer (started as Software / AI Engineer Intern)

- Contributed to **Jotform AI**, a product that enables users to generate Jotform products such as forms through natural language.
- Worked in a large-scale production codebase, fixing bugs and improving existing features across the product.
- Built and maintained features using **React.js**, **TypeScript**, and **PHP**, with **Gemini** and **OpenAI** models used in backend AI workflows.
- Completed Jotform's structured corporate internship program by developing an AI-powered JSON-based UI filter configuration tool using React, PHP, and OpenAI API with enterprise architecture standards.
- Collaborated with product managers, designers, and senior engineers to deliver production-ready features through code review, agile planning, and cross-functional development workflows.

Mastersoft

June 2024 – April 2025

Freelance Full-Stack Developer

Ankara

- Led end-to-end development of LogAI platform from initial concept to production deployment, owning complete product lifecycle including architecture design, implementation, feature development.
- Built comprehensive full-stack solution using React.js with Redux state management, .NET Core backend APIs, and integrated database operations, establishing foundation for scalable enterprise logging and analytics system.
- Developed custom dashboards and data visualization components, taking ownership of both frontend user experience and backend performance optimization for real-time analytics processing.

Polar GIS Engineering And Consulting

June 2023 – January 2024

Frontend Engineering Intern → Part-Time Software Developer

Ankara

- Promoted from intern to part-time Software Developer, developing responsive web applications using Vue.js and .NET for government sector projects including İŞKUR integration systems.

Projects

Jotform AI | *React.js, TypeScript, PHP, Gemini, OpenAI*

2025 – 2026

- Contributed to the development of an AI-powered product that allows users to generate Jotform products, such as forms, using natural language.
- Worked on feature development and bug fixing in a large production codebase, improving product quality and user experience.
- Collaborated on a system built with React.js, TypeScript, and PHP, with Gemini and OpenAI models used in backend AI generation workflows.

Coal | *TypeScript, Node.js, React, SQLite, Codex App Server, Multi-Agent Systems*

2026

- Built a local-first coordination layer for independent Codex CLI sessions, providing durable project rooms, live presence, scope claims, session resume, targeted human guidance, and account-aware handoffs.
- Designed a crash-safe local daemon and durable event log with compartmentalized identities, loopback-only command center, fail-closed claim transfer, delivery recovery, and deterministic cleanup.
- Available at coal-platform.vercel.app with source at github.com/merttcetn/coal.

Research Swarm | *Python, Codex, Claude Code, Agent Skills, Parallel Research*

2026

- Created a reusable multi-agent research workflow that partitions independent reading across read-only subagents, stores complete findings outside the coordinator conversation, and returns compact integrity receipts for synthesis.
- Validated a **97.66% reduction in intermediate main-context tokens**, reducing worker handoff from 7,255 to 170 tokens while preserving 31 findings backed by 94 evidence pointers.
- Open-sourced at github.com/merttcetn/research-swarm.

Ankui | *TypeScript, Node.js, Vite, CLI/TUI, AI Agent Tooling*

2026

- Built **Ankui**, a local-first CLI, terminal UI, and web tool that inventories what AI coding agents — **Claude**, **Codex**, **Cursor**, **Gemini**, **OpenCode**, **Antigravity**, and **skills.sh** — can access, surfacing skills, MCP servers, custom commands, and rules across the filesystem.
- Engineered read-only multi-project scanning, access-risk findings, semantic drift snapshots, sanitized report export, secret masking, reversible skill actions, and a loopback-only web server.
- Published as an open-source npm package (**ankui**) under the MIT license, with landing page at ankui.vercel.app and source at github.com/merttcetn/ankui.

Codex Limits | *Swift, WidgetKit, Codex App Server, macOS*

2026

- Developed a native macOS menu-bar application and WidgetKit desktop widget that display Codex rate-limit windows, remaining capacity, reset times, and expiring limit-reset credits.
- Implemented concurrent multi-account monitoring through isolated CODEX.HOME profiles and local Codex App Server processes without reading or storing authentication tokens.
- Available at codexlimits.vercel.app with source at github.com/merttcetn/codexlimits.

Tabbs | *Swift, AppKit, Carbon, Accessibility APIs, macOS*

2026

- Built a keyboard-first native macOS window switcher that navigates individual windows across Spaces, supports fuzzy search and window actions, and integrates Ghostty and cmux terminal tabs.
- Combined Core Graphics, Accessibility, and WindowServer APIs for cross-Space discovery and activation; shipped signed and Apple-notarized DMG and ZIP distributions with hardened runtime.
- Available at tabbsapp.vercel.app with source at github.com/merttcetn/tabbs.

Consul | *AI-Integrated SaaS, React.js, Product Design*

2025 - Present

- Building **Consul**, an AI-integrated SaaS platform for visa agencies, designed to streamline case management, document collection, and operational workflows.
- Designed as a vertical SaaS solution for visa consultancy businesses, focused on automation, centralized operations, and improved client communication.
- Currently developing the product independently at consulapp.co.

Beacon: AI Voice Assistant for the Visually Impaired | *Computer Vision, LLM, Turkish TTS, Mobile, AI* May 2026

- Built a Turkish-native AI voice assistant that converts the phone camera's field of view into descriptive audio, enabling visually impaired users to navigate outdoor environments independently.
- Implemented three interaction modes — **Buddy Mode** (continuous environmental awareness), **Sports Equipment Recognition**, and **Voice Q&A** — combined with a community-driven accessibility ticket system for mapping physical obstacles.
- Product page available at walkwithbeacon.vercel.app.

Jotform: Dashboard Builder Assistant | *React.js, TypeScript, PHP, OpenAI*

Summer 2025

- Engineered an intelligent JSON-based UI filter configuration system with OpenAI integration, enabling dynamic creation and real-time visualization of complex dashboard filters for analytics teams.

- Developed workflow automation for natural-language-to-JSON conversion and bulk filter editing, reducing manual configuration work and delivering a modern SaaS-oriented user experience.
- Built a scalable React.js frontend with JSON schema validation and PHP backend services; the tool was adopted by internal Jotform teams.

Cyprus Yacht Club: Luxury Yacht Rental Platform | *React.js, .NET Core, RESTful APIs* **2024 - Present**

- Led development team in creating a comprehensive yacht rental e-commerce platform serving real customers with advanced booking system, payment processing, and inventory management for luxury yacht fleet.
- Architected full-stack solution using React.js frontend and .NET Core backend APIs, implementing complex business logic for availability tracking, reservation management, and customer relationship systems.
- Deployed production system currently serving live traffic at cyprusyachtclub.com, featuring responsive design, admin dashboard with CRUD operations, and secure user authentication for both customers and administrators.

LogAI | *React.js, Redux, .NET Core, RESTful APIs* **June 2024 - April 2025**

- Led full-stack development of an enterprise logging and analytics platform, building responsive React.js frontend with real-time data visualization and .NET Core backend services.
- Architected Redux state management for complex dashboard interactions and implemented RESTful API endpoints with secure authentication and role-based access control.

AdilAkil: AI-Powered Legal Assistant for Turkish Law | *OpenAI GPT-4, Pinecone, FastAPI, Next.js* **Spring 2025**

- Built an intelligent legal consultation system providing context-aware answers to Turkish legal questions using advanced RAG architecture with vector embeddings from comprehensive legal document corpus.
- Implemented semantic search with Pinecone vector database containing Turkish legal documents and developed FastAPI backend with async processing for responsive retrieval and generation.
- Created responsive Next.js frontend with TypeScript, featuring advanced query processing, legal document citation system, and bilingual support (Turkish/English) for accessibility.

DermaGPT: Multimodal RAG Chatbot for Skincare | *LangChain, Pinecone, OpenAI, FastAPI, Preact* **Spring 2025**

- Architected a multimodal skincare consultation system combining a RAG pipeline with computer vision for face photo analysis, user quiz data processing, and contextual text query understanding.
- Integrated a curated dermatology knowledge base with OpenAI models and Pinecone vector search for personalized, context-aware skincare guidance.
- Developed full-stack solution with FastAPI backend featuring async processing and Preact frontend with real-time image upload and personalized recommendation flows.

Hackathons & Competitive Programming

Meta Llama Hackathon | *Llama 3.3, OCR, Python, FastAPI, LangChain* **2025**

- Won **2nd place** in 48-hour intensive hackathon, developing Otovize — an AI-powered visa application automation platform that streamlines document retrieval, form filling, and consistency verification using Meta's Llama models.
- Built end-to-end intelligent system with FastAPI backend integrating Llama 3.3 for document processing, personalized checklist generation, and automated letter of intent creation, significantly reducing visa application complexity.
- Earned acceptance into YTU Startup House Pre-Incubation Program as direct result of hackathon performance, positioning Otovize for development into commercial startup venture.

METU Sports Club Hackathon: Beacon | *Computer Vision, LLM, Turkish TTS, Mobile, AI* **May 2026**

- Developed **Beacon**, a Turkish-native AI-powered voice assistant for visually impaired individuals that translates the phone camera's field of view into descriptive audio, enabling independent outdoor mobility — built under the “Geleceğin Çözümleri 2035 — Aktif Birey” track.
- Designed and implemented three distinct interaction modes: **Buddy Mode** for continuous, hands-free environmental awareness while walking; **Sports Equipment Recognition** for guiding users through public park apparatus step by step; and **Voice Q&A** for on-demand natural-language queries about the surroundings.
- Engineered a community-driven accessibility **ticket system** where users and volunteers report, verify, and map physical obstacles with location, photo, and impacted-user profile, producing a live accessibility map that feeds back into the assistant's environmental warnings.

Jotform Frontend Development Challenge | *React.js, JavaScript, Responsive Design* **2025**

- Engineered a comprehensive e-commerce platform demonstrating advanced frontend architecture, component reusability, and modern web development best practices with focus on user experience optimization.
- Delivered exceptional performance resulting in direct recruitment opportunity, showcasing ability to translate complex requirements into production-quality applications under time constraints.

Trendyol E-Commerce Intelligence Hackathon | *Python, Scikit-learn, Pandas, Time Series Analysis* **2025**

- Achieved top 1.6% ranking (97th out of 6,044 participants) in large-scale e-commerce data science competition, competing against industry professionals and academic researchers nationwide.
- Developed sophisticated machine learning recommendation engine using collaborative filtering, time series forecasting, and advanced feature engineering on customer behavior data, delivering enhanced personalization algorithms.
- Implemented comprehensive EDA pipeline with correlation analysis, feature importance ranking, and data leakage prevention techniques to ensure model robustness and production readiness.

Hepsiburada TEKNOFEST AI Address Resolution Challenge | *NLP, Fuzzy Logic, Turkish Language Processing* 2025

- Secured top 36% placement (92nd out of 255 teams) in Turkey's premier AI competition, developing intelligent address standardization system for logistics optimization in last-mile delivery operations.
- Architected advanced NLP pipeline processing Turkish address records using transformer-based models, fuzzy string matching algorithms, and custom Turkish language preprocessing techniques.
- Implemented hybrid approach combining rule-based parsing, machine learning classification, and geographic matching to resolve address inconsistencies and reduce delivery failures.