

Sinan Cem Dağtekin

AI Engineer

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SUMMARY

AI engineer building production AI for education and business: multi-agent systems, retrieval-augmented generation (RAG), LLM infrastructure and computer vision, plus the evaluation layer that checks model outputs before users see them. Builds systems that run reliably under heavy, unpredictable production load, from document AI pipelines to LLM gateways. Background in computer engineering and physics, from deep learning research on medical images to products in daily use. Two-time international award finalist with the Sebit team (Learning Technologies Awards 2024, CODiE Awards 2025).

EXPERIENCE

Data Scientist / Machine Learning Engineer, Sebit Information & Education Technologies (Türk Telekom)

Ankara, Türkiye | Aug 2022 – Present

- SEBIT AI Exam (CODiE Awards 2025 finalist, Best Use of AI in Education): built the AI and computer vision pipeline end to end: document scanning and reading, OCR, AI-based evaluation with explainable (XAI) outputs, and validation.
- Built a high-volume document-reading service from scratch with computer vision and an event-driven architecture (OpenCV, PyMuPDF, Kafka, Kubernetes, FastAPI, PostgreSQL); hardened it to run reliably under heavy, unpredictable production load by fixing failures at the root.
- Built an unsupervised anomaly detection system that flags suspicious decisions for human review: text embeddings, an ensemble of independent detectors (Isolation Forest, DBSCAN, KNN) and severity scoring; evaluate AI outputs with consistency testing, cross-model agreement and LLM-as-a-judge methods.
- Build multi-agent systems, RAG pipelines and LLM-based features as reusable building blocks, with human approval on high-risk decisions; contribute to LLM infrastructure: a central AI gateway with usage and cost tracking for hosted and locally run open-source models.
- Sor O Zaman (Learning Technologies Awards 2024 finalist, Best Use of AI in Learning): built the similarity and recommendation system and the image-processing pipeline; represented the team at the award ceremony in London.
- Time-series forecasting, data analysis and visualization; explain AI trade-offs to leadership and non-technical teams to support decisions.

Independent Developer, Agentic App Factory (personal project)

2026 – Present

- Built a Telegram-controlled multi-agent pipeline that takes Android apps from idea to build: idea discovery, specs, development, store optimization and review triage. An orchestrator agent (OpenClaw) coordinates a coding agent (Claude Code); every high-risk step waits for human approval.
- Has produced several apps end to end (Kotlin, Jetpack Compose, MVVM).

Artificial Intelligence Developer (Freelance), SimurgAI Lab

Türkiye | Jul 2021 – Jul 2023

- Designed and developed deep learning solutions for dental imaging: segmentation, detection and classification on real clinical X-rays labeled by experts.

Computer Vision Intern, SimTek Simulation Technologies

Türkiye | Jun 2021 – Jul 2021

- Designed, developed and debugged two live-video processing tools in C++ with OpenCV and Qt, then merged them into a single multithreaded application.

Software Developer Intern, Karabük University

Karabük, Türkiye | Jun 2020 – Jul 2020

- Developed Python software that prepares data for a conference-indexing service; tested and debugged it for deployment.

SKILLS

LLMs and agents: Multi-agent systems, RAG, prompt engineering, LLM evaluation, explainable AI (XAI), LangGraph, LangChain, LlamaIndex, CrewAI, AutoGen, OpenAI Agents SDK, Claude Agent SDK, MCP

LLM infrastructure: LiteLLM, Ollama, LM Studio, vLLM, Langfuse, vector databases (Qdrant, ChromaDB, pgvector, FAISS), embeddings, rerankers

Machine learning: PyTorch, TensorFlow, Keras, scikit-learn, XGBoost, anomaly detection, NLP, time-series forecasting (statsmodels, Prophet), recommendation systems, reinforcement learning (Gym)

Computer vision and document AI: OpenCV, YOLO, Mask R-CNN, image segmentation, OCR (PaddleOCR, Tesseract), PyMuPDF, vision-language models, Stable Diffusion

Engineering: Python, C++, C, C#, Java, Kotlin, SQL, FastAPI, Docker, Kubernetes, Kafka, PostgreSQL, Oracle Database, Linux, Git, CI/CD

Cloud and data: AWS (S3, SageMaker, Lambda, Step Functions, Athena, Glue), pandas, NumPy, matplotlib, seaborn, Power BI

Other: Android (Jetpack Compose, MVVM), Unity (games, simulations, AR), OpenGL, Qt, statistics and hypothesis testing, linear algebra, optimization

AWARDS AND SPEAKING

Finalist, Best Use of AI in Education, CODiE Awards 2025 (SEBIT AI Exam, with the Sebit team)

Finalist, Best Use of AI in Learning, Learning Technologies Awards 2024, London (Sor O Zaman, with the Sebit team)

National Finalist, TÜBİTAK 2242 University Students Research Project Competition, 2022

Research Grant, TÜBİTAK 2209-A University Students Research Projects Support Program, 2022

Panelist, "Staying Human in Education 5.0: School, Teacher and Student in the Age of AI", 24th Traditional Education Symposium, Private Schools Association of Turkey, Antalya, Jan 2026

EDUCATION

B.Sc. Computer Engineering, Karabük University

Karabük, Türkiye | 2018 – 2022

- Graduation project: Automatic Tooth Recognition and Numbering Using Deep Learning. Segmentation, classification and FDI numbering of teeth on panoramic X-rays with a real, expert-labeled clinical dataset; TÜBİTAK 2242 national finalist, presented at TEKNOFEST Giresun.
- Caries Detection in Panoramic Images Using Pre-trained CNNs (TÜBİTAK 2209-A grant, team of four): Mask R-CNN for tooth detection and numbering, pre-trained CNNs for caries classification.

Physics (Dropout), Middle East Technical University (METU)

Certificates: machine learning, deep learning, statistics, data science, AWS and SQL; full list at sinancemdagtekin.com/certificates

LANGUAGES

Turkish (native), English (advanced), German (elementary)