Emre Sahin

ML/MLOps/Backend Engineer

Emre Sahin

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Skills

ML/MLOps/LLMOps Engineer: Training Models (Python, C++), Computer Vision (OpenCV), Unstructured Data Management (DVC, Xvc), Document Analysis with AI (OpenAI, Anthropic, Gemini models, VLLMs, Word Spotting, Deep Learning with PyTorch, Tensorflow, Theano). Face Detection and Recognition (Transfer Learning, VGG models, MLPs), AI in Legal (Party and Metadata Detection, Contract and Clause Categorization), Continuous Training (Airflow, DVC), Experiment Tracking (MLFlow), Data Preparation (Scripting, Nushell, CSV, JSON, Tableau), Data Analysis (Polars), Deployment (ONNX), Resource Management (Docker, Terraform), Cloud APIs (OpenAI, Azure Cognitive Services, Google Vertex AI, AWS Bedrock), OCR and ICR (Tesseract, Azure Document Intelligence) Retrieval Augmented Generation (Embeddings, Vector stores, Pinecone, Qdrant, pgvector, chunking)

Backend Engineer: Building Servers (Axum, Ruby on Rails), Consuming and Serving REST APIs (Poem, Django, Flask), Authentication with OAuth, Data Architecture, SQL Databases (PostgreSQL, SQLite), NoSQL (MongoDB, Redis), Parallelization (Async in Python, Rust, Threading, Multiprocessing, Sidekiq in Ruby on Rails)

Full Stack Engineer: Front End Development (Vue, Svelte, Dioxus (Rust), TypeScript), Mobile Development (Flutter, Kotlin, Dart)

Technical Writer: Documentation, Markdown, Restructured Text, Docbook, LaTeX

DevOps Engineer: Git, GitHub. Jujutsu, Docker, Terraform. Cloud (AWS, GCP, Azure), Scripting (Bash, Zsh, Nushell), Neovim, Lua

Engineering Manager: Cross-functional collaboration, Mentoring, Career Development, Team Building and Hiring, Code Reviews, System Design, Technology Evaluation and Selection, Roadmapping, Budgeting, Resource Forecasting, Risk management, Stakeholder management, Agile processes, Pair programming, Extreme programming, Cross Cultural Communications,, Auditing

Experience

Emresult OÜ / ML and Software Consultant

APR 2018 - PRESENT, REMOTE

This is my personal company where I build end to end ML and MLOps systems for various clients.

- Built an end-to-end face recognition system working real time with multiple cameras and servers. Using transfer learning on top of VGG-16, Tensorflow and synchronizing multiple Python processes with Redis.
- Built an open source MLOps tool to automate training and data management for ML systems in <u>Rust</u> and <u>Python</u>. Wrote its <u>docs</u>.

Recital / Senior ML and Backend Engineer

FEB 2023 - APR 2025, REMOTE

<u>Recital</u> is a startup specializing in contract negotiation and legal technologies with AI.

- Developed LLM and NLP oriented ML systems focused on LegalOps
- Experimented LLM (OpenAI, Anthropic, Gemini, LlaMa ...)
 effectiveness in various legal tasks like party detection, clause categorization
- Implemented and maintained features in Ruby on Rails backend server, Python (Flask, FastAPI) based ML server
- Built Retrieval Augmented Generation systems with Pinecone, pgvector, Qdrant, Sentence Transformers and chunking libraries

Iterative / Technical Writer and ML Engineer

FEB 2021 - JUN 2022, REMOTE

<u>Iterative</u> is an MLOps company behind tools like <u>DVC</u> and <u>CML</u>

- Wrote, revised, refined technical documentation for DVC project
- Built example projects for users in Docker, Katacoda, Python, PyTorch, Tensorflow to use DVC in various settings
- Tested DVC performance in typical ML scenarios

Teknokrat A.S / Research Engineer and CEO

NOV 2013 - NOV 2017, BURSA TR

Teknokrat was my startup to implement projects in historical handwriting recognition based on my Ph.D. research

- Built an Arabic Video OCR system for Carnegie Mellon University's Human Rights Center to search for names in Youtube videos. This was using models from my research on Ottoman handwriting recognition during Ph.D
- Received TUBITAK grants for historical Ottoman printed text recognition and translation and delivered projects.
- Experimented with deep learning (CNN) and word spotting based solutions for the problem domain

- Built automated transliteration engine for Ottoman/Turkish translation with rule based systems
- Managed a team of engineers and domain experts

$\textbf{DevFactory/Trilogy}\,\,/\,$ Faster TAM and SaaS Ops Manager

JAN 2011 - DEC 2011, REMOTE

DevFactory was a subsidy of Trilogy for offshore development.

- Increased a few desktop software's performance by a few times.
- Promoted to SaaS Ops manager and managed around 20 engineers around the world to maintain 7 SaaS products.

Bilkent University Dept. of Computer Science / Teaching and Research Assistant

SEP 2003 - FEB 2010, ANKARA TR

Bilkent is the top CS department in Turkey.

 Was a TA for various introductory and most notably senior level Artificial Intelligence and Logic for Computer Science courses

Freelance Developer

1996 - 1998, ANKARATR

- Built the first specialized editor on Windows for notary offices in Turkey with Delphi 1

Education

Bilkent University Dept. of CS / Ph.D. (Incomplete)

SEP 2013 - JUL 2016, ANKARA TR

Researched Ottoman Historical Handwritten and Printed Text Recognition under Prof. <u>Pınar Duygulu</u>. Published two conf papers regarding the topic and established a company to build products around the research.

Bilkent University Dept. of CS / Ph.D. (Incomplete)

SEP 2003 - FEB 2010, ANKARA TR

Researched Computational Semantics, Pragmatics and Analogy making with Al systems with Prof Varol Akman. Was a Ph.D. candidate when I dropped out.

Baskent University Dept. of Computer Engineering / BS

SEP 1998 - JUN 2002, ANKARA TR

Graduated with the highest rank in the department.

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