Selman Dedeakayoğulları

Junior AI Engineer | Large Language Models (LLMs) & Computer Vision

Balıkesir/Türkiye selmandedeakayogullari@gmail.com +90 542 538 95 48 Selman Dedeakayoğulları

SelmanDedeakay selmandedeakay.github.io Selman Dedeakayoğulları

PROFILE

Junior AI Engineer with hands-on experience in developing **LLM-powered applications**, computer vision models, and multimodal AI systems. Skilled in building **RAG pipelines**, fine-tuning transformer and vision-language models, and deploying AI solutions with **Python, PyTorch, TensorFlow, and HuggingFace**.

Proven track record as **TEKNOFEST AI Hackathon Finalist** and **OBSS Code Master Winner**, delivering AI products for enterprise clients and academic projects. Passionate about optimizing model performance and translating research into real-world solutions.

EDUCATION

Eskişehir Technical University, *Computer Engineering* 2021 – 2025
Eskişehir, Turkey

- Relevant Coursework: Machine Learning, Computer Vision, Natural Language Processing, Deep Learning
- Graduated with GPA 3.15/4.0.

Vorarlberg University of Applied Sciences, *Exchange Semester* 2023
Dornbirn, Austria

- Attended **Master-level Computer Vision course** with MSc students to deepen expertise in visual AI systems.

University Of Turkish Aeronautical Association, *Computer Engineering* 2020 – 2021
Ankara, Turkey

- Transferred after first year with GPA 3.43
- Member: **IEEE Computer Society**, **Google Developer Students Club**

WORK EXPERIENCE

AI Engineer Intern, *Arena* Dec 2023 – Mar 2025

- Developed and maintained **enterprise-grade chatbots** for Turkish and international clients using **Druid AI** and integrated **LLM-based solutions** (LLaMA, GPT-4, GPT-4o, GPT-4 Vision).
- Delivered multiple **proof-of-concepts** within tight deadlines, leading to successful pilot-to-production transitions.

Software Engineering Intern, *Turkish Aerospace Industries* Nov 2022 – Jan 2023

- Contributed to backend development for various internal modules. Gained experience in large-scale systems. Left early due to Erasmus study abroad program.

Computer Vision Intern, *Visea Innovative* Jul 2022 – Aug 2022

- Designed and trained **classification and segmentation models** using **PyTorch** and **TensorFlow**.
- Experimented with diverse architectures (ResNet, U-Net, MobileNet, EfficientNet, VGG), achieving up to **95% accuracy** on client datasets.
- Automated preprocessing pipelines, reducing model training time by **~20%**.

SKILLS

AI & Machine Learning

- Large Language Models (LLMs), Retrieval-Augmented Generation (RAG), Prompt Engineering, Few-shot Prompting
- Computer Vision, Vision-Language Models, YOLO, CNNs, Stable Diffusion
- HuggingFace Transformers, LangChain, LangGraph, Ollama, Smolagents, Gemini API, OpenAI API
- Model Fine-tuning, Transfer Learning, Feature Engineering

Data Science & Visualization

- Pandas, NumPy, Matplotlib, Seaborn, Scikit-learn

Tools & Platforms

- Docker, Low-Code Development Tools, Google Colab, Jupyter Notebook

Programming & Development

- Python, Java, Flask, FastAPI, Git, Streamlit, Gradio, Selenium
- SQL, MongoDB, SQLite

PROJECTS

Agentic Portfolio Chatbot, *Agents&Gemini API*
- Developed an AI-powered portfolio chatbot using **Google Gemini API + Streamlit**, deployed live on personal website.
- Integrated **job description parser** that analyzes postings and calculates skill match percentage.
- Supports **multi-turn conversations**, improving recruiter engagement during portfolio reviews.

Social Media Analysis for Earthquake Victim Reports, *Large Language Models*
- Built a **multimodal AI pipeline**: LLM-based NLP for social media need extraction + **YOLOv11s** for drone image verification.
- Achieved **92% accuracy** in detecting urgent needs and damage severity.
- Designed system to operate **real-time** with multi-language support for disaster management teams.

Gendiary: New-Gen Social Media via Stable Diffusion, *Stable Diffusion*
- Developed a concept social media app that generates user content using **Stable Diffusion**.
- Designed **daily unique concept prompts** (e.g., mood-based, seasonal, trending events) to encourage user creativity and engagement.
- Focused on **personalized AI content creation**, integrating both visual style templates and user-provided text inputs.

Image Captioning Project, *Vision Language Models*
- Fine-tuned multiple **VLMs** (BLIP, OFA) to generate descriptive captions for custom datasets.
- Optimized pipeline speed by **~40%** via preprocessing and inference adjustments.

Face Recognition Application, *PyTorch*
- Built **MTCNN-based** face detection + recognition system.
- Implemented real-time inference with webcam feed; published detailed **Medium** article on methodology.

REFERENCES

Alperen Enes BAYAR, *AI Research Engineer,* TURKSAT
enesalperenbayar@gmail.com

Abdullatif BABA, *Associate Professor,* Kuwait College of Science and Technology
ababa@thk.edu.tr

Mehmet KOÇ, *Associate Professor,* Eskişehir Technical University
mehmetkoc@eskisehir.edu.tr

Sema CANDEMİR, *Associate Professor,* Eskişehir Technical University
semacandemir@eskisehir.edu.tr

ORGANIZATIONS

IEEE Computer Society Turkey Chapter, *Central Anatolia Coordinator* Sep 2021 – Sep 2022
- Coordinated IEEE CS student branch leaders across Central Anatolia, organizing events, workshops, and conferences.
- **Co-organized CSCON'22**, Turkey's leading student-run Computer Society Congress, held on **March 25–27, 2022 in Ankara**.
- Hosted at ATO Congresium and Ankara University Gölbaşı Campus, the event included conference sessions, over **25 technical trainings**, company booths, networking, and internship showcases.
- Attracted **2,000+ participants** from across Turkey, offering exposure to academic and industry speakers.

AWARDS

TEKNOFEST T3 AI Hackathon Finalist, *T3 (Türkiye Technology Team)* 2024
- Selected among 200+ teams to develop an LLM-based project within 48 hours at the T3 AI Hackathon.

EESTech AI Solutions Challenge, *EESTEC LC Eskişehir* 2023
- Created sentimental analysis solution in an hackathon within 4 hours. Achieved 2nd Place

OBSS Code Master, *OBSS* 2022
- Ranked 1st among university participants in an algorithm-based problem-solving competition

LANGUAGES

English — Proficient

German — Basic

Turkish — Native/Bilingual