

KAZIM TIMUÇİN UTKAN

AI Research Engineer

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EMPLOYMENT

R&D Researcher (TÜBİTAK 1505) <i>Turkcell & Istanbul Technical University</i>	July 2025 – Present <i>Istanbul, Türkiye</i>
<ul style="list-style-type: none">Developed a high-performance ensemble learning system (XGBoost, LightGBM, CatBoost) for administrative tracking, utilizing advanced feature engineering to significantly surpass human benchmarks.Architected an LLM-driven data correction pipeline to automate complex preprocessing and deployed the solution as a scalable service for Turkcell's pre-legal workflows.	
AI R&D Team Lead <i>MLPCare</i>	Aug 2024 – July 2025 <i>Istanbul, Türkiye</i>
<ul style="list-style-type: none">Architected a RAG-based machine translation pipeline using LangChain and OpenAI models, integrating a human-in-the-loop feedback mechanism that iteratively improved translation quality.Deployed the system via Docker and FastAPI, reducing translation latency from days to real-time (seconds) and cutting operational costs by ~99% compared to external vendors.Engineered an ensemble learning framework (XGBoost & Random Forest) for disease prediction (TÜBİTAK 1501), handling end-to-end data preprocessing and feature selection.Implemented an LSTM-based deep learning model for time-series forecasting of hospital revenue and patient inflow (TÜBİTAK 1507), optimizing resource allocation strategies.	
Research Assistant <i>Istinye University</i>	Aug 2022 – July 2024 <i>Istanbul, Türkiye</i>
<ul style="list-style-type: none">Developed 'Company Agent Swarm' using AutoGen framework, designing a multi-agent orchestration layer for automated email management and query resolution.Engineered automated content generation agents for social media platforms using LLMs, deploying bots that synthesized real-time news feeds with high relevance.Assisted in the delivery of undergraduate data science and programming courses, mentoring students on software projects and managing laboratory sessions.	
Research Engineer <i>Istinye University MIS Lab</i>	Dec 2022 – March 2024 <i>Istanbul, Türkiye</i>
<ul style="list-style-type: none">Architected a deterministic simulation workflow, implementing a custom state-transition logic (Observation → State → Response) to model audience psychology.Conducted a large-scale visual bias analysis on 6,000+ synthetic images; co-authored findings in <i>CRC Press</i> titled "Ex Machine, Next Machine, and Still Biased Machine".Engineered a semantic category matching algorithm for Entegra Bilişim, achieving 10x higher accuracy in cross-market taxonomy alignment through automated feature extraction.	
Data Scientist <i>Datafirst.store</i>	Sep 2021 – May 2022 <i>Istanbul, Türkiye</i>
<ul style="list-style-type: none">Architected the sales forecasting infrastructure for e-bebek, optimizing inventory management using XGBoost and LightGBM ensembles.Implemented stress detection algorithms for a gamified Apple Watch application, analyzing biometric signals to classify user reactions in pediatric groups.Developed a license plate recognition pipeline using OpenCV and Tesseract OCR, applying classical computer vision techniques for efficient edge processing.	

TEACHING EXPERIENCE

Lecturer (Digital Game Design) <i>Istinye University & Gedik University</i>	Oct 2024 – Present <i>Istanbul, Türkiye</i>
<ul style="list-style-type: none">Delivering advanced undergraduate courses on Intelligent Agents and Machine Learning, teaching architectures for game AI and autonomous decision-making systems.	

INTERNATIONAL NETWORKS

Working Group Member <i>COST Association</i>	Jan 2025 – Present <i>Remote / Europe</i>
<ul style="list-style-type: none">Contributing to international research actions (CA22145) focused on Computational Techniques in Tabletop Games Heritage and AI-driven analysis of game dynamics.	

SELECTED PROJECTS

APA 7 Citation Helper (tchain.ai): Engineered a specialized GPT agent for automated academic citation formatting, currently serving 100K+ users with a 4.3/5.0 satisfaction rating on the GPT Store [🔗](#).

Automated ECTS Transfer System (Beta): Developing an autonomous agentic framework using **LangChain** and **LangGraph**, utilizing semantic similarity to match cross-university curriculums with high precision.

AI-Powered Exam Grading Pipeline (Beta): Architecting an automated assessment workflow utilizing **LangSmith** for evaluation and **LangGraph** for orchestration, ensuring consistent grading standards.

EDUCATION

Ph.D. in Industrial Engineering

Istanbul Technical University

2024 – Present

Istanbul, Türkiye

- Focus: Autonomy of Large Language Model Agents ([LLMs for Automated Personalized Feedback](#) [🔗](#)).

M.Sc. in Artificial Intelligence Engineering

Üsküdar University

2024

Istanbul, Türkiye

- Thesis: [Investigating the efficacy of Large Language Models in automating B2B communications](#) [🔗](#).

B.Sc. in Mechanical Engineering

Trakya University

2020

Edirne, Türkiye

- Focus: Robotic applications and interdisciplinary AI integration.

INVITED TALKS, KEYNOTES & WORKSHOPS

”Can Artificial Intelligence Learn Free Will?” – Erzincan Binali Yıldırım University

Jan 2026

”AI Applications in Migration Studies” – UNESCO MOST School & İstinye Univ.

July 2025

”Can Artificial Intelligence Fall in Love?” – Uludağ University

June 2025

”Next-Generation Artificial Intelligence in Games” – Gedik University

May 2025

”Can Artificial Intelligence Replace Humans?” – Atatürk University

Dec 2024

”A Mirror to Humanity: Artificial Intelligence” – Trakya University

Dec 2024

”New Borders of Humanity” – İstinye University

Nov 2024

LANGUAGES AND TECHNOLOGIES

Tech Stack: Python, SQL, LangChain, LangGraph, LangSmith, AutoGen, OpenAI API, PyTorch, TensorFlow, Scikit-Learn, FastAPI, Docker

Languages: Turkish (Native), English (C2 - Proficient)

PUBLICATIONS

Utkan, K. T., & Öztayşı, B. (2025). [Large Language Models for Automated Personalized Feedback in SQL Education](#) [🔗](#). IN-FUS.

Utkan, K. T., & Ozdemir, S. (2024). [GPT-based Audience Attention and Emotion Analysis](#) [🔗](#). CRC Press.

Unal, C., ..., **Utkan, K. T.**, et al. (2024). [Ex Machine, Next Machine, and Still Biased Machine](#) [🔗](#). CRC Press.