

ELIF ERDAL

Mechatronics Engineering graduate with a focus on AI and data engineering. Specialized in leveraging data-driven and cloud technologies to contribute to innovative and impactful solutions.

Data Engineer & Mechatronics Engineer

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WORK EXPERIENCE

Ronesans Holding | DWH Developer | 2024

- Developed and optimized data pipelines on AWS using DBT and MSSQL, integrating ERP data through APIs to deliver clean datasets.
- Enabled KPI dashboards and executive reports in Power BI and Web application (Rmore), ensuring scalability and accuracy across business units.

OTHER EXPERIENCE

Mentor & Researcher | Tubitak 2209 - A | 2025

- Served as AI mentor for a TÜBİTAK-funded public health project developing AI-powered educational tools to raise HPV and cervical cancer awareness among healthcare students.

Turkcell | Geleceği Yazan Kadınlar AI Intern | 2024

- Completed advanced training in Python, PostgreSQL, and API Testing.
- Specialized in Advanced Machine Learning and gained applied experience in NLP and LLMs.
- Co-developed AllerMind, an AI-driven IoT system predicting allergy risks using pollen and air quality data through real-time model inference.

Inventra(Bluesense) | AI Engineer | 2024

- Engineered an **AI-driven** acne detection health system leveraging **PyTorch** and real-world datasets, optimizing **image processing** workflows to enhance diagnostic accuracy and minimize manual intervention.

AI Instructor | Ministry of National Education | 2023

- Educated high school students on **AI** fundamentals, including **Machine Learning** and **Neural Networks**, through hands-on projects.

Mentor & Researcher | Erasmus+ | National Agency | 2023

- Conducted research on utilizing vegetable waste as organic fertilizers in Europe to promote sustainable agriculture.
- Developed skills in data collection, analysis, and experimental design.

PROJECTS

Aller - Mind | AI-Driven Environmental Health & Allergy Risk Prediction System | Co-Developer Turkcell Geleceği Yazan Kadınlar / 2025

- Built a services platform (Spring Boot, Flask) to deliver real-time allergy risk from pollen/air/weather signals.
- Built and optimized ensemble ML architecture combining Random Forest, Gradient Boosting, SVR, Extra Trees, and Neural Network models.
- Shipped Dockerized services to Google Cloud Run; PostgreSQL on managed hosting; CI/CD-ready.
- Exposed REST APIs (Swagger/OpenAPI) and a Flutter client for location-based risk & safe-hours guidance.
- Led data pipeline design (ingestion, cleaning, rollups) and latency optimization for sub-second inference.

End-to-End Real-Time IoT Device Security : Threat Detection and Resource Management [Istanbul Data Science Academy](#) / 2024

- Structured and implemented a **Google Cloud Platform** for **IoT**, focusing on analyzing and mitigating security vulnerabilities.
- Utilized **Apache Spark** for **real-time data processing** and **Apache Nifi** for automated **ETL** and **data integration**.
- Leveraged **Apache Kafka** for **data streaming** to ensure seamless **data flow**.

Senior Year Project | TUBITAK 2209-A | 2021

- Developed a vertical farming system using ESP-8266 and MQTT communication for remotecontrol. Optimized soil-free farming through sensor data integration and real-time monitoring.

EDUCATION

- Bachelor of Science | Mechatronics Engineering
Gaziosmanpasa University, Tokat, TR | Member of IEEE
GPA : 3.3

- Intern | Erasmus+
Kielce University of Technology, Kielce, PL

CERTIFICATES

- Certificate of Data Engineering & Big Data Bootcamp
- Certificate of Big Data and Machine Learning on Google Cloud
- Certificate of Data Analyst on Google Cloud
- Certificate of Essentials on Google Cloud
- Certificate of Machine Learning Modeling and Model Analysis

EXPERTISE

- Languages - **Python, C++, C#**
- Database - **MSSQL, PostgreSQL**
- Cloud Technologies - **GCP, AWS**
- Big Data Frameworks - **Spark, Hadoop**
- Containerization - **Docker**
- Operating Systems - **Linux**
- Data Pipeline & ETL - **Apache Nifi, DBT, Airflow, Prefect**
- Data Streaming - **Apache Kafka**
- Data Warehousing - **BigQuery**
- IoT Technologies - **MQTT**
- Advanced **English**

COURSES

- AWS - November 2025
- MLops & LLMops - November 2025
- PowerBI - October 2025

REFERENCES

References will be provided upon a request.