

SKILLS

ML & AI:	PyTorch, scikit-learn, Transformers, XGBoost, LightGBM, CatBoost, Optuna, SHAP, LIME, LLM/RAG pipelines, Agent Orchestration (MCP)
Languages:	Python, SQL, Unix/Linux Scripting, Git
Cloud & Databases:	Azure (AZ-900, DP-900), Snowflake, Databricks, MSSQL, PostgreSQL, MongoDB, Teradata
Data Engineering:	Airflow, Kafka, Docker, Spark, Dataiku, IBM DataStage
Frameworks:	Django, FastAPI, Streamlit, Pydantic, Pytest
BI & Monitoring:	PowerBI, Tableau, Grafana, ELK Stack

EXPERIENCE

R&D Specialist

DHL Express

Apr/2025 — Present

- Developed a transformer-based address error detection pipeline trained on 1.27M shipment records using GTE-base sentence embeddings with ensemble classifiers (XGBoost, LightGBM, CatBoost). Published at IEEE UBMK 2025. Patent application filed.
- Extended address work into a deep learning routing system mapping noisy Turkish address text to 3 destination facilities with 99.45% macro-F1 at 0.0153ms inference latency using 1D-CNN with LIME explainability. Published at INFUS 2026 (Springer).
- First-authored two systematic literature reviews published as book chapters at YAEM 2025 and YAEM 2026 (44th and 45th Operations Research and Industrial Engineering Congress): simulation applications in logistics (2025) and AI and operations research applications in express cargo transportation (2026).
- Engineered a hybrid RAG + LLM + MCP system for DHL Express Turkey’s customs operations, enabling natural language resolution of both unstructured regulatory queries (legislation PDFs) and structured operational data (EVRIM/BILGE databases via MCP). Architecture incorporated sentiment analysis, topic modeling, and hybrid keyword-semantic retrieval; targeting 90%+ intent classification accuracy, Recall@5 above 85%, and sub-5-second end-to-end latency, with autonomous handling of 30% of routine call center queries. Patent application filed for the secure RAG + MCP integration component.
- Formulated a binary integer linear program jointly optimizing customer-to-depot and vehicle-to-depot assignment across DHL Express Turkey’s 3 Istanbul distribution centers to minimize demand-weighted distance. Accepted at ISPR 2026.
- Automated end-to-end generation of Freight Non-Existence Letters across 150-200 daily inbound shipment requests, cutting per-request processing time from 1.5 minutes to under 15 seconds via a Snowflake → Dataiku → MSSQL → IIS pipeline with full audit logging, freeing 0.5 FTE and extending availability from business hours to 7/24.
- Led company-wide AI literacy program delivering hands-on training to 200+ employees across all departments in two sessions.
- Leading RPA implementation across DHL Express Turkey in partnership with UiPath, delivering 10 live RPA processes across multiple business units as the end-to-end project owner for the country’s digital transformation program.
- Selected for DHL Rising Stars 2025 as one of five participants recognized across DHL Express, engaging with DHL Express Europe’s C-suite (CEO, CIO, CFO, SVP HR).

Data Scientist

Bosch

Oct/2023 — Mar/2025

- Developed AI-SCREP (AI-Powered Scrap Reductive Prescription), an ML system generating optimal manufacturing parameter recipes for aluminum wheel production. Reduced client defect rates from 10% to 1-2%, saving up to €120K annually. Won a global Bosch innovation award; presented at Bosch Analytics Day to 2,000+ attendees across 40+ countries.
- Trained predictive maintenance and Remaining Useful Life (RUL) models using the Hilbert-Huang Transform (HHT) for non-stationary signal analysis on manufacturing equipment, achieving 89% failure detection recall on production data.
- Competed into SparkUp 2025 (Bosch x UC Berkeley) as Intrapreneur; led development of GecoAI, an AI-powered edge device for HVAC optimization in hospitality. Presented to Bosch Turkey CEO; greenlit for investment.
- Deployed end-to-end data pipelines and IoT analytics solutions for manufacturing clients including Maxion Wheels, featured in Bosch’s internal publication (bzo.bosch.com).

ML Researcher

Koc University

Jul/2023 — Jul/2024

- Contributed to an EU-funded NLP project (KUSRP) classifying sentiment in IMF Executive Board meeting minutes across 611 documents, 97,444 labeled sentences, 127 countries, spanning 1983-2015. Benchmarked BoW, N-gram, TF-IDF with LR, SVM, RF classifiers alongside RoBERTa-large and FinBERT; fine-tuned BERT achieved 97.2% accuracy on binary sentiment classification vs. 85.4% for the TF-IDF+SVM baseline.

EDUCATION

Bahcesehir University, Master of Science, Computer Engineering	Oct/2025 — Jun/2027
Bahcesehir University, Bachelor of Engineering, Computer Engineering	Oct/2020 — Jan/2025