

Deniz Sağmanlı

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EXPERIENCE

- Türkiye İş Bankası (İşbank), Data Scientist & System Specialist, Istanbul** November 2024-Present
- Pioneered an Agentic AI solution leveraging LLMs to automate customer authorization checks, reducing manual work by 96% and saving 240 FTE across bank branches.
 - Developed predictive Machine/Deep Learning models for banking and financial forecasting.
 - Designed and implemented large-scale Generative AI assistant applications to improve workflow efficiency.
 - Optimized Machine Learning algorithms for classification tasks, improving model accuracy and performance.
- Lifemote Networks, Customer Success Manager, Istanbul** May 2022-August 2023
- Supervised ISPs within the UK and Greenland.
 - Engineered a Data Science and Analytics algorithm to track ISPs' mesh upgrade success rates, reducing unnecessary truck-roll and mesh upgrade costs by 26%.
 - Trained end-users and facilitated the onboarding of new customers.
 - Amplified product value for 18% of customers by leading and coordinating taskforces.
- n11.com, Data Science Department Intern, Istanbul** June-July 2021
- Programmed a Machine Learning algorithm that predicts the probability of churn of customers with 76% accuracy using their purchase data.
- Liebherr, Mobile Crane Department Intern, Istanbul** June-July 2020
- Replaced the electromagnetic angle sensor of a mobile crane.
 - Advocated the error analysis and switch replacement of cranes.

EDUCATION

- University of Nottingham, School of Science, Nottingham** 2023-2024
MSc in Computer Science, GPA: Distinction (4.0/4.0)
- Koç University, College of Engineering, Istanbul** 2018-2022
BSc in Electrical and Electronics Engineering, GPA: 3.2/4.0
- TED Istanbul College, Istanbul** 2014-2018
GPA: 87.4/100.00, Honor Award of Foreign Languages Department
Chairperson of School Board as an Independent Candidate

PUBLICATIONS

- Rahi, B., Sağmanlı, D., Oppong, F., Pekaslan, D., & Triguero, I.,** 2025
Generalising Stock Detection in Retail Cabinets with Minimal Data Using a DenseNet and Vision Transformer Ensemble. *Machine Learning and Knowledge Extraction*, 7(3), 66. <https://doi.org/10.3390/make7030066>
- Achieved 91% accuracy on new cabinet models using only 2 images/class.
 - Outperformed standard few-shot methods by 47% accuracy margins.
 - Developed novel CNN-Transformer ensemble for retail inventory automation.

PROJECTS

- Detection of Dengue Fever Cases Using Machine Learning** 2024
- Forecasted Dengue cases for 2 cities using 3 different ML models.
 - Achieved a 4% improvement over the current #1 solution on DrivenData (out of 5600+ competitors).
- Sentiment Analysis of 2020 U.S. Presidential Election Tweets** 2024
- Categorized the sentiment of 2 million tweets, determining the polarity of voters using novel Big Data approaches.
- Autonomous Drone SLAM, Positioning and Real-time Object Detection** 2021-2022
- Developed an Autonomous Flying Drone, with a web-based user interface, Object Detection using Deep Learning with 90% precision, SLAM and 3D Mapping.
 - Exhibited at Consumer Electronics Show (CES) 2022 in Las Vegas.
 - US Air Force, Department of Defense and a French company wanted to incorporate the project into their operations.

Smart Home Security System

2021-2022

- Created a security system that can sense fire, sound and movement using flame, sound, and infrared sensors.
- The system gathered data and sent notifications to mobile phones over Wi-Fi in the event of a fire or burglary.

LEADERSHIP & AWARDS

Postgraduate Excellence Award

2023

- Scholarship awarded to students who are academically outstanding at the University of Nottingham.

Vehbi Koç Scholar Honors Award

2021

- Awarded to students who are academically outstanding at Koç University.

Licensed Basketball Player, Istanbul

2011-2017

- Played for Darüşşafaka, Okyanus College Sports Club, High School Basketball team.

European Youth Parliament Conferences, Turkey

2014-2018

- Collaborated in 11 EYP Conferences as Chairperson, Journalist, Delegate, Video Editor and Organizer.

SKILLS

Technical: Experience in Machine Learning, Data Analysis, Data Visualization, Data Science, Big Data, Generative AI and Agentic AI. Proficient user of Python, SQL, Tensorflow, Keras, Scikit-learn, Pandas, NumPy, Matplotlib, Seaborn, PySpark, LangChain, Amazon S3, R, MS Office, Docker, Linux, Java, MATLAB, C, C++, Swift, HTML, CSS, PHP, JavaScript, VHDL.

Languages: Fluent in English, Turkish. Above-intermediate level German. Beginner level Russian, French.

Interests: Scuba diving, Snowboarding