

ALPEREN US

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EDUCATION

Koç University

2020 - 2025

B.S. in Computer Science & Engineering

B.S. in Molecular Biology and Genetics

TEVITOL

2015 - 2020

High School Diploma (Specialized School for Gifted Students)

GPA: 93/100

PROJECTS

Telco CRM Microservices Project

Full Stack Developer

Personal Project

- Architected a scalable **Microservices** ecosystem using **Java Spring Boot** and **Spring Cloud**.
- Implemented **Event-Driven Architecture** with **Apache Kafka** for asynchronous data synchronization.
- Established **synchronous** inter-service communication using **OpenFeign** declarative REST clients for real-time operations.
- Integrated **Redis** for distributed caching to optimize basket operations and reduce database load.
- Built a dynamic frontend with **Angular** and **TypeScript**, featuring modular components.
- Secured the system utilizing **Spring Security** and **JWT** for stateless authentication.
- Orchestrated the development environment using Podman to manage containers for PostgreSQL, MongoDB, Redis, Elasticsearch, and Kafka.
- Technologies: Java, Spring Boot, Angular, Kafka, Redis, OpenFeign, Podman, PostgreSQL.

Mobile Game Data Analytics

Independent Case Study

- Deployed a containerized local data warehouse using **Docker** and **PostgreSQL** to manage large-scale game event data.
- Engineered an ETL pipeline using Python (**psycopg2**); optimized ingestion of **2.6 GB+** raw data by implementing SQL COPY command.
- Conducted advanced SQL analysis for business metrics (Retention Rates, Marketing ROI) and visualized trends.
- Technologies: Python, SQL (PostgreSQL), Docker, Pandas, Psycopg2, Jupyter.

Personal Travel Assistant

Mobile & Backend Developer

Personal Project

- Developed a native Android application using **Kotlin** and **Jetpack Compose** for tracking flight prices.
- Engineered a custom backend with **Java Spring Boot** to process flight data and expose **REST APIs**.
- Integrated **Retrofit** for efficient network operations and handled UI state management with **ViewModel**.
- Implemented **Firebase Cloud Messaging (FCM)** to deliver real-time push notifications for price alerts.
- **JWT** for stateless authentication.
- Technologies: Kotlin, Java Spring Boot, Android SDK, Jetpack Compose, Retrofit, Firebase, REST API.

Customer Segmentation Analysis

Advanced Data Analyst Internship

SEM

- Conducted customer segmentation using clustering techniques such as K-Means.
- Applied dimensionality reduction with PCA and feature scaling with StandardScaler.

- Developed predictive models to enhance customer targeting and retention strategies.
- Technologies: Python, Pandas, NumPy, Scikit-learn, Matplotlib, Seaborn.

Stock Prediction App

AI Developer Intern

ETIYA

- Utilized yfinance library for fetching historical stock data.
- Implemented LSTM model using Keras for time-series prediction.
- Evaluated model performance using Root Mean Squared Error (RMSE).
- Technologies: Python, Keras, matplotlib, NumPy, Scikit-learn.

Alchemists (Software Engineering Course)

- Developed a multiplayer/online 2D board game project.
- Integrated Java Sockets using TCP/IP for networking.
- Technologies: Java, JavaFX, Java Sockets, Gradle, UML.

Finance App (Database Management Systems Course)

- Crafted a web application for financial management, encompassing transaction tracking, portfolio management, stock market data, news, and watchlists.
- Utilized Yahoo Finance API for real-time stock values.
- Technologies: Python, FastAPI, Docker, MySQL, Alembic.

EXPERIENCE

ETIYA

September 2025 - Present

Software Developer Specialist

Istanbul, Türkiye

- System Maintenance and Optimization: Maintain and optimize an existing NLP-based Named Entity Recognition (NER) platform

SEM

August 2024 - September 2024

Advanced Data Analyst Intern

Istanbul, Türkiye

- Worked with the advanced analytics team on a customer segmentation project.
- Applied predictive models and clustering techniques to analyze customer behavior.

ETIYA

July 2023 - August 2023

AI Developer Intern

YTU Teknopark

- Developed skills in Natural Language Processing (NLP) and transformer-based architectures.
- Led a project to automate article summarization using an AI model.

COSBILAB

September 2022 - February 2023

Data Science Intern

Koç University

- Contributed to studies focused on predicting protein-protein interactions using machine learning techniques.
- Utilized Python and data structures to preprocess and analyze biological data.

KUYBIIG-M

September 2021 - May 2022

Research Assistant

Koç University

- Contributed to research focused on studying the structure of protein and ribosome complexes using X-ray Crystallography methods.
- Assisted in experimental procedures and data analysis related to structural biology research.

TECHNICAL SKILLS

Programming	Java (Spring Boot), Kotlin, TypeScript, Python, SQL
Frameworks	Spring Cloud, Angular, Hibernate
Data & Infra	PostgreSQL, MongoDB, Redis, Apache Kafka, Elasticsearch, Docker
Data Science	Pandas, NumPy, Scikit-learn, TensorFlow, PyTorch
Tools & DevOps	Git, Maven, Postman, Podman, Docker, Unix/Bash
Structural Biology	X-ray Crystallography methods, Bioinformatics tools

ACTIVITIES

Koç Rams American Football Team (2020-2022)

Played as a Wide Receiver, contributed to the team's success in winning the National Championship in 2020-2021.