# Yunus Emre Gültepe

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# Summary

Results-oriented final-year Software Engineering student (Sakarya University, 3.37/4.0 GPA) with international study experience (Erasmus+ at AGH University, Poland). Proven ability in full-stack web development, specializing in React.js, Node.js/Express, and Python (Flask). Demonstrated skills through diverse projects involving AI integration (Google Gemini, Mistral-7B), 3D graphics (Three.js), networking (Zeroconf), and applying DevOps principles. Passionate about clean code and best practices, seeking a challenging Software Engineer role or internship in Europe to contribute technical skills and grow further.

### Education

• Sakarya University

Sakarya, Turkey Aug 2020 – Expected Jun 2025

Bachelor of Science in Software Engineering

GPA: 3.37 / 4.00

(Includes 1 year of English Preparatory Class)

• AGH University of Science and Technology

Erasmus+ Student Exchange Program (Computer Science)

Kraków, Poland Sep 2024 – Feb 2025

# Skills

Programming Languages: Python, JavaScript (ES6+), SQL

Web Technologies: React.js, Node.js, Express.js, Flask, RESTful APIs, HTML5, CSS3, Mantine

UI, Three.js, WebGL, Sockets

Databases: MongoDB, PostgreSQL

AI/ML: (Google Gemini/ OpenAI) API, Mistral-7B (Basic Integration), FAISS (Vector

Search), NLP Concepts

Tools & Platforms: Git, Docker, OpenCV (cv2), Linux, Netlify, Zeroconf/Avahi, Vite, Jenkins

(Basic)

Concepts: Object-Oriented Programming, Data Structures, Algorithms, Networking

Principles, DevOps Principles, Cloud Computing Concepts (AWS

Fundamentals), Clean Code Practices, Digital Image Processing Concepts

# **Projects**

#### AI Face Recognition Attendance System

[Private Repository]

- Developed a comprehensive backend for an automated attendance system using FastAPI, PostgreSQL, and Docker, featuring real-time facial recognition.
- Implemented student enrollment with image upload, MTCNN face detection, Facenet embedding generation (via DeepFace), and FAISS for efficient similarity search.
- Designed background task processing for live attendance, handling image capture data, liveness checks (place-holder), and preventing duplicate attendance logs.
- Established database schema with SQLAlchemy, managed migrations with Alembic, and ensured containerized deployment with Docker Compose.
- Technologies: Python, FastAPI, PostgreSQL, SQLAlchemy, Alembic, Docker, Docker Compose, RESTful APIs, Pydantic, DeepFace (Facenet), MTCNN, FAISS, OpenCV, TensorFlow, NumPy, Git.

- Created a cross-platform (Linux/Windows) desktop tool for direct file, folder, and text transfer using Python, Tkinter, and sockets.
- Implemented automatic device discovery via Zeroconf (Avahi/Bonjour), transfer progress display, confirmation prompts, and optional self-signed TLS encryption.
- Technologies: Python, Tkinter, Sockets, Zeroconf, Threading, Pillow, Git.

#### AI Sakarya University Chatbot

[GitHub]

- Developed a full-stack chatbot (React frontend, FastAPI backend) to answer student queries using university documents.
- Implemented two RAG pipelines: one using local Mistral-7B (Ollama) and another advanced version using OpenAI (GPT-3.5/4) with multilingual capabilities.
- Integrated FAISS for vector search, implemented Cross-Encoder re-ranking, conversational memory, date awareness, and prompt engineering for context-aware, accurate responses in Turkish/English.
- **Technologies:** React, FastAPI, Python, JavaScript, FAISS, Sentence Transformers, OpenAI API, Ollama (Mistral-7B API), REST API, Git, RAG.

#### WhatCanICook? - AI Recipe Suggester

[GitHub]

- Developed a full-stack web app suggesting recipes from user ingredients using Google Gemini API, featuring tag-based input and dynamic recipe cards with Unsplash images.
- Implemented a Flask backend with RESTful APIs, LRU caching to minimize API calls, and input validation; built a responsive React frontend with Mantine UI and notifications.
- **Technologies:** React, Flask, Python, JavaScript, Google Gemini API, Unsplash API, Mantine UI, CSS, HTML, Git.

#### Interactive 3D Solar System

[GitHub]

- Built an interactive 3D solar system visualization using Three.js, rendering planets, dwarf planets, and the Sun with orbital paths and relative rotational speeds.
- Implemented camera controls (orbit, zoom, pan), click-to-select functionality with camera focusing/following, and an information panel displaying celestial body data.
- Technologies: JavaScript, Three.js, HTML5, CSS3, WebGL, Git.

## Licenses & Certifications

- AWS Academy Cloud Architecting (60 hours) AWS Academy (Jan 2025)
- Raconf 25 Web Application Security SAUSIBER (Apr 2025)
- DevOps Solutions (Jenkins) BTK Akademi (Jan 2024)
- Document Types and Data Formats BTK Akademi (Jan 2024)
- $\bullet$  Web Development with HTML5 BTK Akademi (Jan 2024)
- The Complete JavaScript Course 2023: From Zero to Expert! Udemy (Oct 2023)
- The Complete 2023 Web Developer Bootcamp Udemy (Jul 2023)

## Honors & Awards

- Certificate of High Honor Sakarya University (Fall 2022-2023)
- Certificate of Honor Sakarya University (Spring 2022-2023)
- Certificate of Honor Sakarya University (Fall 2021-2022)

## Languages

- Turkish: Native
- English: Proficient (B2/C1 Equivalent; Erasmus+ Study Abroad Experience)
- German: Basic Knowledge (Just started Actively Learning)