Yusuf Beraat Negiz

Antalya, Türkiye • yusufberatnegiz@gmail.com • +90 551 192 67 25 • GitHub • LinkedIn

Education

Antalya Bilim University — Antalya, TR
Computer Engineering. GPA 3.1/4.0 — June 2027

Experience

INNOSU R&D, NOOVOY AI — Remote
AI Agent Intern — July 2026 – Present

- Contributed to the development of an **AI onboarding agent** designed to support employee onboarding through **RAG, document retrieval and context-aware response generation**.
- Worked on agent workflows involving **policy and FAQ retrieval, personalized onboarding guidance, role-specific 30/90-day learning plans, mission assignment and progress tracking**.
- Contributed to the multi-agent architecture, defining interactions between specialized agents, users, internal knowledge sources and structured workflows.
- Supported **TRL 4 validation** of the AI-agent prototype through controlled testing, evaluation metrics, logging, failure-case analysis and human-review processes.
- Built and deployed the bilingual (Turkish/English) NOOVOY AI product website with **Next.js, TypeScript and Tailwind CSS**, including the visual identity, responsive UI and automated smoke tests.

Gamelab Istanbul — Remote
Game Development Intern — July 2025 – August 2025

- Contributed to the development of **GlistEngine**, a custom game engine written in **C++**, by working within an existing codebase and supporting the implementation and improvement of engine-related components.
- Worked with core game-development concepts such as **engine systems, application logic and performance-oriented C++ development**.
- Identified and resolved software issues through debugging and code analysis, while becoming familiar with maintaining and extending a larger C++ project.

Projects

TEKNOFEST S.A.K.A: Computer Vision & Autonomous Systems

- Developed the **computer-vision and traversability-mapping pipeline** for an autonomous UAV/UGV search-and-rescue system.
- Trained and fine-tuned **SegFormer-B0 and YOLOv8n** models for terrain segmentation, object detection and mission-specific target/helipad detection using custom and synthetic datasets.
- Built the dataset and training workflow, including **image collection, annotation, validation, class balancing and synthetic-data generation**.
- Converted UAV perception outputs into **2D occupancy/traversability grids** and integrated them with **ROS** for autonomous UGV navigation.
- Developed the **UAV–UGV perception data flow**, enabling terrain and detected-object information gathered by the UAV to be transmitted to the ground vehicle for navigation and mission planning; worked with **Jetson Orin Nano, UAV cameras and LiDAR-based sensing**.

Low-Cost Hyperspectral Plant Monitoring System (with Altıntar Tarım)

- Designed and built a **DIY 500-950 nm pushbroom hyperspectral camera** from a global-shutter monochrome sensor, M12 optics, a 300 lines/mm diffraction grating and a 500 nm long-pass filter, for **about USD 600** in hardware.
- Developed an automated monitoring system for **Altıntar Tarım's** plant lab, where the camera scans lettuce and pepper on a **1.5 m rail** alongside **low-cost RGB cameras**, run by a **Raspberry Pi 5** with a **PostgreSQL** database and a web dashboard with plant-level alerts.
- Built the processing pipeline for **chlorophyll and nitrogen-status estimation** from spectra (spectral indices, PLSR) and **plant height, stem diameter, leaf count/area and vigor scoring** from RGB images, calibrated against staff measurements and lab analyses.

Accountie**: AI Bookkeeping Assistant for Accountants**

- Built a **SaaS for Turkish accountants** that reads receipt, invoice and Z-report photos with a **vision LLM (Claude)** and turns them into journal entries, using **Next.js, TypeScript, Supabase (PostgreSQL) and Drizzle ORM**.
- Developed a **Chrome extension** that imports client firms from the Luca accounting software, transfers approved entries to it and tracks clients' **e-Tebligat** (official tax notices).
- Added **credit-based billing with iyzico payments**, rate limiting, encrypted credential storage and Sentry monitoring; deployed on **Vercel**.

Exai**: AI-Powered Exam Preparation Platform**

- Developed an **AI-powered study platform** for generating and organizing practice questions for midterms, quizzes and final exams.
- Built features including **exam mode, topic-based question organization and weak-topic review**.
- Integrated generative AI into a structured study workflow to create personalized practice material.

Skills & Interests

Technical:

- **Languages:** Python, C++, C, Java, TypeScript, JavaScript, SQL
- **AI / Computer Vision:** PyTorch, Hugging Face, OpenCV, SegFormer, YOLO, Semantic Segmentation, Object Detection
- **LLM / AI Agents:** RAG, Multi-Agent Workflows, Document Retrieval, Vision LLMs (Claude), Agent Evaluation
- **Robotics:** ROS/ROS 2, Occupancy Grids, UAV/UGV Systems, Jetson
- **Web / Mobile:** Next.js, React Native, Expo, Tailwind CSS, Supabase, PostgreSQL, Drizzle ORM
- **Other:** Git, Linux, Vercel, Sentry, Raspberry Pi

Language:

- Turkish (Native), English (C2), German (A2)