

ONUR EREN TAŞCI

AI-Powered Mobile Engineer | React Native & Computer Vision

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PROFESSIONAL SUMMARY

Software engineer specialising in cross-platform mobile development and applied computer vision. Ships React Native and Expo products end to end — architecture, API integration, QA and store release — and embeds on-device deep learning into them, including YOLO-based object detection, image segmentation and OpenCV image-processing pipelines. Works within a senior product team on applications published to the App Store and Google Play, on TÜBİTAK BİGG-funded AI ventures, and on an award-winning UAV computer-vision ground control station (1st place, TÜBİTAK 2242 Defence, Space & Aerospace).

TECHNICAL SKILLS

Mobile Development: React Native, Expo, TypeScript, JavaScript, React.js, React Navigation, Redux, Offline-First Architecture, Push Notifications, REST API Integration, In-App Purchases (RevenueCat), OTA Updates (EAS), WebSocket Real-Time, iOS & Android Release Workflows, App Store & Google Play Deployment, Performance Optimisation

Image Processing & Computer Vision: OpenCV, YOLO / YOLO11, Image Segmentation, Object Detection & Tracking, Digital Image Processing, Image Preprocessing & Augmentation, Feature Extraction, Barcode Recognition, Real-Time Video Processing, On-Device Inference, ONNX Runtime, Model Training & Fine-Tuning

AI, Machine Learning & LLM: Python, PyTorch, TensorFlow, pandas, NumPy, Deep Learning, Classical Machine Learning, Exploratory Data Analysis, Model Evaluation, LLM Integration, RAG, GraphRAG, Llama 3.1, Gemini API, Semantic Retrieval, NLP

Backend & Data: Node.js, Express.js, FastAPI, Flask, REST API Design, Firebase, MongoDB, PostgreSQL, SQL

Embedded & Robotics: PyQt5, MAVLink, Pixhawk PX4, DroneKit, Serial/UART, Telemetry Systems, IoT, Arduino

Tools & Practices: Git, GitHub, Docker, CI/CD, Postman, Agile/Scrum, Code Review, Technical Documentation

PROFESSIONAL EXPERIENCE

Mobile & AI Software Engineer

Vespula Software Studio | Remote | March 2025 – Present

- Build cross-platform mobile and AI products end to end within a small senior team, covering architecture, implementation, QA, store release and production support across iOS and Android.
- Contribute to two TÜBİTAK BİGG artificial intelligence ventures — Kök-Zeka (awarded funding) and UMAP — spanning on-device inference, embedded integration and RAG/GraphRAG architectures.
- Work on React Native and Expo applications featuring camera and on-device vision pipelines, real-time features, subscription paywalls and multi-language releases shipped to the App Store and Google Play.

Artificial Intelligence and Data Analysis Instructor

Samsun Metropolitan Municipality & UNDP | Samsun, Türkiye | September 2025 – March 2026

- Planned and delivered a curriculum in artificial intelligence, data analysis and machine learning under the “Today’s Youth, Professions of the Future” programme (a joint UNDP and municipal initiative), covering Python, image-processing fundamentals and applied machine learning workflows.

Mobile Developer Intern

Bigtaus Information Technologies (LetsParky) | Ankara, Türkiye (Hybrid) | September 2024 – April 2025

- Developed and maintained production-grade React Native features and React.js web modules with API-driven backend integration for LetsParky, the company’s live parking management platform.
- Applied state management patterns to optimise performance across Android and iOS builds, working within CI/CD-aware workflows, structured issue tracking and peer code review.

AI/ML Developer Intern

Adapha Artificial Intelligence R&D and Software | Samsun, Türkiye | August 2024 – September 2024

- Engineered Python-based image-processing pipelines for R&D use cases, covering preprocessing, feature extraction and evaluation workflows.
- Performed exploratory data analysis and produced visualisations supporting computer vision model development.

Web Development Intern

Bordo.io | Samsun, Türkiye | June 2024 – August 2024

Co-Founder & Mobile Developer

Melodine (Startup) | Remote | September 2023 – May 2025

- Co-founded a mobile startup and led end-to-end product development with React Native and Expo, integrating Node.js, Firebase and MongoDB with REST API and CRUD workflows, AR-based order previews and real-time collaborative playlist control.

Mobile & Frontend Developer

Kazoo Radio | Samsun, Türkiye | November 2022 – August 2023

- Built reusable React Native interfaces, audio streaming features and CRUD-based mobile workflows for a digital radio platform, optimising performance across a range of device profiles.

SELECTED MOBILE & COMPUTER VISION PROJECTS

NannAI — AI Nutrition Assistant (B.Sc. Graduation Thesis)

React Native, YOLO11, OpenCV, Llama 3.1, Gemini API | 2025 | Supervisor: Prof. Dr. Zafer Cömert

- Built a fully offline AI nutrition assistant in React Native that analyses meals from a single photo using on-device deep learning models, with no server round-trip required.
- Trained and integrated four custom YOLO11 segmentation models for real-time food recognition and portion-aware calorie estimation.
- Fine-tuned a Llama 3.1 model for in-app health conversations and integrated Open Food Facts with the Gemini 1.5 Flash API for barcode-based allergen detection, cross-referenced against user allergen profiles.

TreasureHunterX — Cross-Platform Mobile Game

React Native, Expo, Laravel, WebSocket, RevenueCat, Firebase | 2025 – Present | App Store & Google Play

- Built a real-time, location-based treasure-hunt game with camera-driven visual scanning and gamification mechanics, shipped on both iOS and Android.
- Implemented real-time gameplay over Laravel Reverb WebSockets, RevenueCat subscriptions with dynamic paywalls, localisation across 14 languages, EAS Update OTA delivery and Sentry monitoring.

İkarus UAV AI Dashboard — Ground Control Station

Python, PyQt5, OpenCV, MAVLink, WebSocket | 2024

- Developed an AI-enabled ground control station with real-time telemetry, computer vision pipelines and autonomous mission-support modules.
- Implemented real-time aerial object detection and tracking for threat identification during fully autonomous flight; awarded 1st place in TÜBİTAK 2242 Defence, Space & Aerospace and a Teknofest Combat UAV finalist.

Kök-Zeka — Modular National AI Education Kits

TÜBİTAK BİGG 1812 (Awarded Funding) | On-Device AI, Embedded AI, Block-Based Programming | 2025 – Present

- Co-developing a modular AI education platform combining on-device inference, embedded hardware and smart sensors, building block-based AI components for object recognition and voice-command training workflows.

Integrated AI Education Ecosystem

React Native, Custom LLM, Computer Vision, Genetic Algorithms | 2025 – Present

- Contributing to an AI education platform serving students, teachers, parents and administrators on a single custom LLM core, with root-cause learning analytics and personalised learning-path routing.

UMAP — National Text Analysis Platform

TÜBİTAK BİGG | Python, LLM, RAG, GraphRAG, NLP, On-Premise AI | 2025 – Present

- Co-developed a privacy-first, on-premise enterprise AI platform for institutional knowledge retrieval and decision support using RAG and GraphRAG, contributing to Turkish LLM evaluation on a 500M-token dataset.

LEADERSHIP & COMPETITION ENGINEERING

UAV Software Developer & Combat UAV Team Captain

İkarus ARGE — Aerospace Student Team, Samsun University | Samsun, Türkiye | October 2022 – August 2024

- Engineered a Python-based MAVLink communication interface with Pixhawk PX4 flight controllers and built a PyQt5 ground control station for real-time telemetry visualisation.
- Served as Team Captain (August 2023 – August 2024), leading multidisciplinary development, test preparation and competition execution.

Team Lead & Python Developer

Samsun AI Team, Samsun University | Samsun, Türkiye | November 2020 – June 2022

- Led a student AI and robotics team delivering Python and machine learning training while developing YOLO-based real-time object detection and UAV/robotics communication modules.

IoT & Embedded Programming Instructor

Deneyap Türkiye (T3 Foundation) | Samsun, Türkiye | November 2023 – February 2024

HONOURS & AWARDS

- 1st Place — TÜBİTAK 2242 University Students Research Project Competition, Defence, Space & Aerospace Category
- TÜBİTAK BİGG Excellence Seal — UMAP, National Text Analysis Platform
- Teknofest Combat UAV (Savaşan İHA) Finalist, 2023 · ABB Hackathon Finalist, Azerbaijan, 2021

EDUCATION

Samsun University — B.Sc. in Software Engineering

Samsun, Türkiye | September 2020 – July 2025

LANGUAGES

Turkish — Native | English — Professional Working Proficiency