Arda Duman

Fullstack Software Engineer

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Fullstack Software Engineer (M.Sc. Informatics, TUM) with hands-on experience delivering production-scale applications using **TypeScript, Node.js, Angular, Kotlin, and React Native**. *Proven track record in* **REST API design, SOLID principles, modular architecture, and microservices**. *Experienced in* **cloud-native development** *(AWS, Azure, Firebase),* **Docker, CI/CD pipelines**, *and cross-functional Agile teams. Passionate about building clean, maintainable, scalable systems across the full stack.*

Experience

Feb 2025–Jun 2026 **Co-Founder & Fullstack Engineer**, *RotaGo*, Munich

- **Co-founded** and **launched** a **SaaS platform** for bus companies enabling dynamic pricing and route optimization, deployed on **AWS** (EC2, Lambda) with a scalable **REST API** backend, **Next.js** frontend on **Vercel**, and **Supabase** for authentication and AI-based analytics.
- **Built** the manager dashboard and operator interfaces using **React**, **TypeScript**, **Node.js**, **Tailwind CSS**, and **shadcn/ui**, implementing reusable component architecture and client-server data flows.
- **Owned** the product end-to-end across architecture, development, and deployment, from database schema to the interface a user directly interacts with.

Oct 2023–May 2025 **Software Engineer (Working Student)**, *RideBee*, Munich

- **Delivered** 60+ merged pull requests across feature development, UI redesigns, and bug fixes for a B2B mobility platform using **Kotlin** and **Java**, integrated via **REST APIs** with third-party services, while pursuing a full-time **M.Sc.** degree in parallel.
- **Led** the migration of 13 screens from XML to **Jetpack Compose** and built a reusable **design system** (typography, input, toggle, list components) adopted across the entire codebase.
- **Refactored** core application modules to improve separation of concerns and long-term maintainability, improving test coverage and decoupling business logic from framework dependencies.
- **Collaborated** with product and design teams in **Agile/Scrum** sprints to translate enterprise client requirements into scalable **API designs** and frontend solutions, participating actively in **code reviews**.

Jan 2024–Jun 2024 **Frontend Engineer (Working Student)**, *Enmacc*, Munich

- **Developed** and optimized an internal energy trading platform using **Angular**, serving internal operations across multiple business units.
- **Architected** a reusable component library of 15+ modular UI components, reducing feature development time and ensuring consistent design patterns across teams.
- **Improved** UI load performance by optimizing **CSS** and data-binding strategies, achieving measurably faster rendering on critical trading views.

Mar 2022–Aug 2022 **Software Engineer**, *Setur (Koç Holding)*, Istanbul

- **Rebuilt** the Setur Mobile Application from scratch using **React Native** and **TypeScript**, delivering a modern cross-platform foundation scaled to **millions of users**.
- **Developed** core user-facing screens including flight, hotel and tour **search flows** with filtering & sorting, **reservation calendar**, shopping cart, user registration, search history, and hotel listing cards.
- **Established** architectural conventions for the greenfield codebase, enabling consistent patterns across a team of 5+ engineers throughout the migration.

May 2020–Nov 2020 **Software Developer (Part-time)**, *Kurulum Cognitive Services*, Istanbul

- **Built** an **OCR-based document processing pipeline** in **Python** using Machine Learning models for automated ID card recognition and classification.
- **Built RESTful** frontend components integrated with backend services for real-time data ingestion and classification results.

Education

2022–2026 **M.Sc. Informatics**, *Technical University of Munich (TUM)*, Munich, *Passed with Merit. Thesis: 1.3*

Major: **Engineering Software-intensive Systems**. Minors: Computer Architecture, Distributed Systems, Algorithms.

Master's Thesis: A Risk-Aware Road Cost Framework Driven by Satellite Damage Detection for POD Location–Allocation *(Python, Computer Vision, GIS, Network Optimization)*.

- Developed an optimization framework using **Computer Vision** on satellite imagery to detect post-disaster road damage and compute dynamic road costs.
- Engineered a **Python**-based data pipeline integrating **GIS** datasets to optimize Points of Distribution (POD) allocation for disaster relief.

2016–2021 **B.Sc. Computer Engineering**, *Koc University*, Istanbul, *GPA: 3.03/4.00 (US Scale)*

Graduated with **High Honor List**. 50% Merit Scholarship. Track Programs: Computer Systems & Networks; Cryptography & Security; Data Analytics.

Projects

Feb 2026–Present **iOS Puzzle Game — TyLoop**, *Independent Developer*, App Store

- **Shipped** a puzzle game to the App Store using **Swift**, **SwiftUI**, and **StoreKit 2**; integrated **CloudKit** leaderboards, **Game Center** achievements, and **AdMob** with ATT consent.
- **Designed** a zero-backend architecture and managed the full pipeline from TestFlight through App Store submission.

2021 **Anomaly Detection — Crypto Market**, *Senior Graduation Project*

- **Built** a full-stack anomaly detection system: **Python**/**Azure** ML backend, **Firebase Firestore** for data storage, and **Firebase Cloud Messaging** for real-time push notifications to a **Flutter** mobile client.
- **Designed** end-to-end architecture including **REST API** layer and cloud deployment on **Microsoft Azure**.

Skills

Backend **Kotlin, Java, Python**, SQL, Node.js, C/C++, REST API Design, Microservices, Spring Boot

Frontend/Mobile **Next.js, Jetpack Compose, Angular, React, React Native, Flutter, Swift, SwiftUI**, TypeScript, JavaScript, Tailwind CSS, shadcn/ui

Cloud/DevOps **AWS, Microsoft Azure, Google Cloud (Firebase), Vercel, Supabase, CloudKit**, MongoDB, CosmosDB, PostgreSQL, **Docker, CI/CD, Git**

Tools Android Studio, Xcode, VS Code, Jira, **Agile/Scrum**, Unit Testing, StoreKit 2, AdMob, **AI-assisted Development** (Claude Code)

Languages

English (Full Professional), German (Beginner - A2 in progress), Turkish (Native)