

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 **Kotlin, Java, Angular, and React Native**. Proven track record in **REST API design, modular architecture, and microservices**. Experienced in **cloud-native development (Azure, Firebase), CI/CD pipelines, and cross-functional Agile teams**. Passionate about building *maintainable, scalable systems across the full stack*.

Experience

- 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.
- 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
- **Optimized** a document processing pipeline using **Machine Learning** models in **Python**, automating ID card recognition and reducing manual processing time.
 - **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.
- Feb 2025–Present **RotaGo**, *Co-founder*, www.rotago.com.tr
 - **Launched** a **SaaS platform** for bus companies enabling dynamic pricing and route optimization via a scalable backend with **REST APIs**.
 - **Developed** a **Flutter** app for real-time operator pricing management and contributed to **AI-based** market analytics.
- 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
- Frontend/Mobile **Jetpack Compose, Angular, React Native, Flutter, Swift, SwiftUI**, TypeScript, JavaScript
- Cloud/DevOps **Microsoft Azure, Google Cloud (Firebase), 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)