# EN

# Enes Uca

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https://leetcode.com/u/ensuca/

https://github.com/ensuca

Portfolio : https://ensuca.github.io/ensuca.githubio/

## Education

**Ondokuz Mayıs Üniversitesi**

Department of Computer Engineering

**High School**

**Nazmi Arıkan Fen Lisesi**

## Experience

**Freelance** | Software Developer (2 year)

**Bentego** | Data Engineering, Data Analysis Intern (3 months)

- I performed data cleaning, transformation, and database querying tasks using **Python** and **SQL**.

**Quixey** | Software Development Intern (1 month)

- Developed mobile application search engines and discovery platforms.

- Integrated and tested software modules using **Java**.

- Participated in code reviews and Agile stand-up meetings.

**Eero Labs** | Software Development Intern (3 months)

- Developed and maintained smart home network devices and **IoT** platforms.

- Integrated and tested software modules in **Python**.

**Quibi** | Android Developer (6 months)

- Developed and maintained Android applications using **Kotlin** and **Java**, ensuring smooth performance and clean architecture (**MVVM**).

- Integrated **RESTful APIs** and **Firebase** services (Authentication, Realtime Database, Cloud Messaging) to enhance app functionality.

- Collaborated with the design team to implement **responsive UI/UX** following **Material Design** guidelines.

**Rizort** | Backend Developer, Java Server Administration (3 months)

- Developed backend solutions optimizing database operations for a luxury holiday booking platform.

- Managed database design, query optimization, and data integrity using **MySQL**.

# Freelancer Projects

https://tanhukukvearabuluculuk.com

- Engineered modern full-stack application using **Next.js 14 App Router**, **TypeScript** strict mode, and **React 18**, delivering type-safe production-ready web platform.

- Architected security-first infrastructure incorporating **Iron Session**, **JWT tokens**, **bcrypt** hashing, rate limiting, CSP headers, and comprehensive audit logging.

- Designed sophisticated database schema using **MySQL** with **7 normalized tables**, views, stored procedures, and triggers for complex business logic and data integrity.

- Established DevOps excellence through multi-stage **Docker** builds and **GitHub Actions CI/CD pipeline**, enabling automated deployment and rollback capabilities.

https://moilcars.com(continues)

- Built full-stack web application using **Node.js**, **Express.js**, **MySQL**, and **Sequelize ORM**, delivering production-ready e-commerce platform with comprehensive feature set.

- Implemented advanced authentication system featuring email verification with cryptographic tokens, **bcrypt** password hashing, and **JWT**-based session management for enterprise-level security.

- Developed intelligent recommendation engine with multi-level vehicle selection process across category, brand, model, body style, and engine type, incorporating multi-fallback matching algorithms.

- Achieved comprehensive SEO optimization through XML sitemap generation, robots.txt configuration, dynamic meta tags, and canonical URLs for enhanced search engine visibility.

https://beyazinciklinik.com

- Developed production-ready MVC architecture using **Node.js** and **Express.js** with clean separation of concerns and **RESTful API** design principles.

- Implemented enterprise authentication featuring **JWT token-based** authentication, **bcrypt** password hashing, and role-based access control supporting admin, doctor, and assistant roles.

- Established security hardening through Helmet middleware, rate limiting, CORS configuration, input validation, and comprehensive error handling for production-level protection.

- Built automated email system using Nodemailer with transactional notifications and professional HTML templates for appointment confirmations and status updates.

https://fizyodinamik.com

- Engineered intelligent scheduling system with real-time availability engine, conflict prevention mechanisms, and **30-minute granularity** for production-ready appointment management.

- Implemented multi-channel automation using **cron-based** scheduler for email notifications via **Nodemailer** and SMS alerts through **Twilio API**, delivering automated reminders **90 minutes before appointments**.

- Achieved advanced image optimization through client-side compression reducing file sizes by **60-80%** and **server-side** Sharp processing for WebP conversion and responsive image generation.

- Developed full-featured CMS with **WYSIWYG editor**, drag-and-drop post reordering, and automatic image optimization for streamlined content management.

https://github.com/ensuca/Kuyumcu-Yonetim-Sistemi

- Developed industry-specific desktop application using **C# Windows Forms** with comprehensive inventory management tailored for jewelry retail operations including gold rate tracking, stone quantity management, and labor cost calculations.

- Integrated barcode functionality using **ZXing.Net** library with automatic barcode generation, scanning capabilities, and image-based storage for efficient product identification and tracking.

- Architected secure database layer using **Entity Framework 6.4.4** and **SQLite** with parametrized queries, ensuring maintainable and injection-proof data access infrastructure.

- Implemented business process automation including bulk operations, real-time stock updates, and sales tracking to enhance operational efficiency and reduce manual errors.

https://github.com/ensuca/linkSaver

- Demonstrated Python web scraping expertise by developing a production-ready link extraction tool using **BeautifulSoup4** and **Requests** libraries with comprehensive error handling and modular architecture.

- Engineered automation-ready deployment solution with **Docker** containerization and cron job integration, enabling scalable enterprise-level implementation across distributed systems.

- Achieved performance optimization by processing large web pages containing over **1000 links** within **3-10 seconds** while maintaining minimal resource footprint through efficient memory management.

https://github.com/ensuca/Optik_Form_Okuyucu

- Engineered advanced image processing system using **OpenCV** with a sophisticated **7-stage pipeline** incorporating morphological operations, Canny edge detection, adaptive thresholding, and contour analysis to achieve **98%+ bubble detection accuracy**.

- Developed real-time processing capability on Android platform that evaluates 20-question optical forms in **under 3 seconds**, demonstrating production-grade mobile application performance.

- Implemented intelligent bubble detection algorithm with automatic calibration for varying lighting conditions and form orientations, showcasing adaptive computer vision expertise.

- Architected production-ready solution following clean architecture principles and SOLID design patterns, ensuring maintainable and testable codebase with clear separation of concerns.

## Projects

https://github.com/ensuca/UserFlow

- Implemented enterprise-level state management using **Redux Toolkit** with type-safe async thunk patterns, ensuring predictable application state and seamless data flow across components.

- Achieved **100% TypeScript coverage** with strict mode enabled, eliminating runtime errors and optimizing developer experience through comprehensive type safety.

- Designed security-first authentication system featuring **JWT**-based protected routes, client-side validation, and comprehensive error handling to create production-ready security infrastructure.

- Architected scalable service layer enabling seamless transition from mock implementations to real API endpoints, demonstrating forward-thinking system design and maintainability.

https://github.com/ensuca/ecommerce-platform

- Developed enterprise-grade backend system using **Spring Boot 3.3.3** with layered architecture implementing **Controller-Service-Repository pattern**, delivering maintainable and scalable **RESTful API** infrastructure.

- Established production-ready DevOps workflow through **GitHub Actions** automated **CI/CD pipeline** and **Docker** containerization, enabling consistent deployment across multiple environments.

- Implemented comprehensive testing strategy using **JUnit 5** and **Mockito** for unit and integration tests, ensuring code reliability and maintainability through extensive test coverage.

- Configured multi-database support with **H2** for development and **MySQL** for production environments, providing flexible deployment scenarios and seamless environment transitions.

https://github.com/ensuca/sensorCommunication

- Demonstrated IoT protocol expertise by implementing multi-hop wireless communication on **Contiki OS using RPL routing protocol** and **UDP over IPv6**, addressing real-world sensor network challenges.

- Engineered event-driven architecture leveraging **protothreads** for non-blocking concurrent operations, achieving low-power optimization critical for battery-powered IoT deployments.

- Implemented both problematic and thread-safe versions of the Reader-Writer concurrency pattern, demonstrating comprehensive understanding of synchronization challenges and solutions.

- Incorporated production-level concepts including message validation, bidirectional relay routing, and network congestion management to simulate real-world IoT deployment scenarios.

https://github.com/ensuca/LibraryApp

- Developed secure desktop application using **C# Windows Forms** with role-based access control implementation supporting distinct admin and user privileges for multi-tier authorization.

- Implemented database security best practices through parametrized SQL queries preventing injection attacks and bcrypt-based secure credential validation for user authentication.

- Architected three-tier system with clear separation between Presentation, Business Logic, and Data Access layers, adhering to separation of concerns principles.

- Integrated **Entity Framework ORM** to create maintainable and scalable data access layer, demonstrating proficiency in modern **.NET** development practices.

https://github.com/ensuca/havayolu_rezervasyon

- Demonstrated advanced concurrency mastery by implementing thread synchronization and fine-grained locking mechanisms using **Java ReentrantLock** for production-grade concurrent operations.

- Engineered comprehensive Reader-Writer pattern implementation showcasing both race condition scenarios in unlocked versions and proper synchronization in locked implementations.

- Simulated high-contention real-world booking system with **24 concurrent threads** comprising **12 readers** and **12 writers**, demonstrating scalability under load.

- Implemented production-ready patterns using try-finally blocks ensuring guaranteed lock release and thread safety guarantees in all code paths.

# Abilities

**Programming Languages & Frameworks**

- Backend: C#, Java, Node.js, Express.js, Spring Boot, Python
- Frontend: TypeScript, JavaScript, React.js, Next.js, HTML, CSS, EJS
- Mobile: Android (Kotlin, Java), Android Studio

**Software Architecture & Design**

- Microservices Architecture
- Event-Driven Architecture
- Domain Driven Design (DDD)
- RESTful API Design
- MVC and Layered Architecture Patterns
- SOLID Principles and Clean Architecture

**DevOps & Infrastructure**

- CI/CD: GitHub Actions, Automated Deployment Pipelines
- Containerization: Docker, Kubernetes
- Cloud Platforms: AWS, Azure, Google Cloud
- Version Control: Git, Sourcetree
- Build & Deployment: Multi-stage builds, Automated rollback

**Database & Data Management**

- Relational Databases: MySQL, PostgreSQL, SQLite
- ORM Technologies: Entity Framework, Sequelize
- Database Design: Schema optimization, stored procedures, triggers
- Big Data: Apache Spark, Linux, Cloudera

**Development Practices & Methodologies**

- Agile Development
- Test-Driven Development (TDD)
- Continuous Integration/Continuous Delivery
- Code Review and Collaboration
- Unit and Integration Testing (JUnit, Mockito)

**Security & Authentication**

- JWT Token-based Authentication
- Role-Based Access Control (RBAC)
- Security Hardening (bcrypt, input validation, rate limiting)
- Secure coding practices and vulnerability prevention

## Languages

- Türkçe: Native Lanuage
- English: Intermediate – Advanced level

## Certifications

Sourcetree, Git and GitHub Usage : https://www.udemy.com/certificate/UC-e10e9abf-9737-4b20-8835-6e80b66cfd33/

Programming with Python : https://www.udemy.com/certificate/UC-c81d8d1e-79e6-400c-bbdf-3cea09c875cf/

Web Development : https://www.udemy.com/certificate/UC-0a902bf9-5ebb-4d79-961b-81c60be41b2c/

EFSET English Certificate 66/100 (C1 Advanced) : https://cert.efset.org/sjFN28