

# Hasan Erdem Ak

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## SUMMARY

Full-stack Developer & Assistant Team Leader with expertise in .NET, C#, React, and TypeScript. Experienced in building secure, scalable applications and implementing best practices for RESTful APIs. Strong background in software engineering, algorithms, machine learning, and AI. Skilled in technical leadership, team coordination, and Agile methodologies. Passionate about continuous learning and delivering high-quality software.

## EDUCATION

### Computer Engineering Bachelor's Degree

Sep 2018 – Sep 2023 | Ankara, Türkiye

TOBB University of Economics and Technology

- Relevant Coursework: Computer Programming, Object-Oriented Programming, Data Structures, Algorithm Analysis, Design Patterns, Database Systems, Software Engineering, Operating Systems, System Programming, Computer Network and Security, Computer Architecture and Design, Machine Learning, Artificial Intelligence, Natural Language Processing, and Introduction to Cyber Security
- Extracurricular Activities and Leadership Roles: Technical lead of Google DSC TOBB ETU, Founder chairman of Table Tennis Society, Vice chairman of Music Society, Vice chairman of the Algorithmic Finance Society, and Board member of Blockchain Society
- High-School Valedictorian (1st/120 students, 2018)

## SKILLS

**Programming Languages** — C#, Java, Python, C, TypeScript, JavaScript

**Web Technologies** — HTML, CSS

**Frameworks & Libraries** — .NET Core, ASP.NET Core, Entity Framework, React, Spring Boot, Hibernate, Django, Node.js, Bootstrap, WPF

**Databases** — SQL, MSSQL, SQLite, PostgreSQL

**Operating Systems** — Windows, Linux, MacOS

**Tools & IDEs** — Git, GitHub, Bitbucket, SourceTree, Postman, Swagger, Visual Studio, VS Code, IntelliJ IDEA, Azure DevOps

**Concepts & Methodologies** — OOP, RESTful API, CI/CD, Unit Testing, Agile Methodologies, Design Patterns

## PROFESSIONAL EXPERIENCE

### Siren IT Solutions

Oct 2023 – present | Ankara, Türkiye

Full-stack Developer & Assistant Team Leader

- **Engineered and maintained 70+ modules** for Securitas's secure internal portal, using **C#/ASP.NET Core** and **EF** on the back-end and **React** with **TypeScript** on the front-end to deliver a consistently intuitive experience.
- **Reduced API response times by 80%** by optimizing LINQ queries and application code, significantly improving system performance and scalability.
- **Completed 20% of all project tasks**, demonstrating high productivity and commitment to delivering key features on schedule.
- **Resolved 25% of production bugs**, ensuring system stability and improving overall software quality.
- **Designed and tested RESTful APIs** with **Swagger/Postman**, ensuring security, scalability, and performance.
- **Co-led a 9-member team**, mentoring junior developers through code reviews, task evaluations, and sprint planning meetings.

### Bumper UK

Sep 2022 – Dec 2022 | Ankara, Türkiye

Back-end Developer Intern

- **Developed 2 admin-panel modules** using **Python, Django, SQLite, HTML, CSS, JS**, following the **MVT pattern**.
- **Built a CSV import/export pipeline** with 100% field validation and color-coded error UX, blocking bad records from production DBs.

*Front-end Developer Intern*

- **Contributed** to LEGA, a **Spring Boot** microservices **REST** web application, by developing **Angular** modules and collaborating within a **10-member Kanban team**.
- **Implemented** front-end components with **TypeScript** and **Angular**, integrating them with back-end services and resolving **UI/UX** issues across **15 screens**.
- **Reinforced Oracle data integrity** by adding missing foreign-key constraints, eliminating unlinked rows, and smoothing future schema migrations.

**SimBT**

May 2021 – Sep 2021 | Ankara, Türkiye

*Full-stack Developer Intern*

- **Developed WPF applications** in **.NET (C#, XAML, MVVM)** for **Turkey's first domestically developed virtual bridge simulator**, enhancing maritime training.
- **Engineered 15 real-time navigation & engine-control components**, including control and display panels, using **UDP and multithreading** to improve system performance and responsiveness.
- **Integrated Unity** for specific simulation elements, enhancing realism and interactivity in training environments.
- **Profiled scenarios** with 5-60 ships using **Visual Studio Profiler**, identifying CPU bottlenecks and guiding refactors that **reduced frame stutter by 25%**.

## PROJECTS

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**SMArt (Security Management Art)**

Developed a software platform for Securitas, a global leader in security solutions, as part of Siren IT Solutions. The platform enables administrative employees to securely record and report work-related transactions while allowing field employees to fulfill and document operational tasks. It enhances workflow efficiency and department-wide communication. As a Full-Stack Developer, contributed to both the back-end (C#, ASP.NET, Entity Framework) and front-end (React, TypeScript), focusing on security, usability, and scalability. Designed and implemented a secure, user-friendly internal web portal that aligns with Securitas' high standards for operational excellence.

**Securitas Fire Services Website**

Developed and enhanced the official website for Securitas Fire Services, which provides comprehensive fire protection for industrial facilities, shopping centers, tourism complexes, and other high-risk environments. Improved website security by refining the Content-Security-Policy (CSP), upgrading Bootstrap and jQuery versions, and implementing UI enhancements for a better user experience. Additionally, contributed to server-side security and version management on the FTP-hosted platform, ensuring smooth functionality and robust protection against vulnerabilities.

**LEGA**

Developed front-end features for LEGA, a litigation and enforcement management platform designed by Innova to streamline legal and administrative processes for corporate lawyers and contracted law offices. The platform, available in two versions (LEGA & LEGA Lite), provides a centralized and modern approach to case management. As a Front-End Developer Intern, contributed to the Angular & TypeScript-based interface within a Spring-powered microservices architecture. Implemented new features, ensured seamless REST API integration with back-end services, and designed UI components to enhance user experience and functionality. Gained valuable enterprise software development experience and deepened expertise in modern web technologies.

**MARSIM (Maritime Simulator Family)**

Developed WPF-based simulation panels for MARSIM, Turkey's first domestically developed virtual bridge simulator, designed by SimBT to enhance naval training and operational preparedness. The system provides highly accurate modeling of ship maneuvers, open-sea operations, and port entry/exit simulations. Implemented UDP-based real-time communication, enabling efficient data exchange between simulation components. Optimized system performance through multithreading techniques, ensuring smooth and responsive interactions. Additionally, contributed to visual components of the simulation using Unity, enhancing realism and user experience. This project strengthened expertise in high-performance data processing, network communication, and real-time simulation UI development.

**For more projects, visit my portfolio: <https://hasanerdemak.github.io>**

# CERTIFICATES

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**Problem Solving (Intermediate)**

Issuer: HackerRank

**Problem Solving (Basic)**

Issuer: HackerRank

**Introduction to Python Programming**

Issuer: Developer Ecosystem Programs

**Beginner's Series to Blockchain**

Issuer: Google DSC TOBB ETU

# LANGUAGES

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**Turkish:** Native | **English:** B2 (Upper-Intermediate) | **German:** A1 (Beginner)