

# Mustafa Onur Erkan

Istanbul, Türkiye | +90 534 367 86 16 | mustafaonurerkan01@gmail.com | [LinkedIn Profile](#)

---

## EDUCATION

**Sabancı University**, Faculty of Natural Sciences and Engineering  
*Bachelor of Science in Computer Science and Engineering*  
Sep 2020 - Jun 2025

**Tekirdağ Anatolian High School**  
Sep 2015 - Jun 2019

---

## CERTIFICATIONS

- **İstanbul Ticaret Odası Softlto Akademi** - Cybersecurity Program | Jun 2026 - In progress
  - **VBO** - AI & LLM Bootcamp | Aug 2025 - Oct 2025
  - **Nvidia DLI** - Fundamentals of Deep Learning | Apr 2024
  - **YTÜ SKYLAB** - Embedded Systems Bootcamp | Feb 2024
- 

## WORK EXPERIENCE

**Software Engineer Intern**, Akbank | Jul 2024 - Aug 2024

- Contributed to the **Saga Transaction Management Project**, enhancing distributed transaction control using the saga pattern.
  - Collaborated with senior engineers in an Agile environment, attending daily stand-ups, sprint planning, and DevOps meetings.
  - Used **SonarQube** to detect and resolve code quality issues, improving performance and reliability.
  - Worked with **Kafka, Oracle, and .NET** technologies.
- 

## PROJECT EXPERIENCE

**Multi-Agent Travel Planner** (AI & LLM Bootcamp) | Sep 2025 - Oct 2025

- Designed a **LangGraph (multi-agent orchestration)** pipeline that converts free-text requests into day-by-day itineraries.
- Built **LLM-based intent parsing** (Gemini API; schema-constrained JSON, few-shot) to extract days, transport, budget, interests, and **rules** (e.g., 1 restaurant/day).
- Implemented **tool-use** with the Google Places API; mapped place **types** → **semantic tags**, applied **lodging filtering**, quality thresholds, and deduplication.

-Developed a **deterministic constraint engine** that enforces user rules, removes outliers, fills weak days by proximity + rating, and produces transparent “**why this route**” rationales.

### **Stock Exchange Trading Bot with Machine Learning** | *Nov 2024 – May 2025*

- Built an advanced trading bot combining **LSTM-based forecasting** with technical indicators (EMA, MACD, RSI, Momentum).
- Integrated a **real-time NLP module** for financial news sentiment analysis.
- Implemented stop-loss and take-profit strategies for risk management.
- Backend in .NET, frontend in React.

### **E-commerce Platform** | *Nov 2024 - Jan 2025*

*Technologies:* Node.js, Express.js, MySQL, React.js, Postman, PDFKit, Nodemailer, HTML5, CSS3, JavaScript, Axios, Git

- Developed a full-stack system with refund handling, sales reports, and real-time order management.
- Designed **RESTful APIs** and integrated **MySQL** for secure data storage.
- Created dynamic PDFs with PDFKit and automated email delivery via Nodemailer.
- Built a responsive UI in React.js.

### **IoT-Based Smart Greenhouse Monitoring and Control System** | *Nov 2024 - Jan 2025*

- Created an **IoT-enabled system** to monitor temperature, humidity, light, and soil moisture.
- Used **UDP protocol** for real-time wireless sensor communication.
- Applied predictive analytics for resource optimization.

### **Graduation Credit Calculator Mobile App** | *Jan 2024*

- Developed a graduation credit calculation app.
- Backend: Spring Boot, MongoDB, Java; Frontend: Android Studio.

### **DiSucord** | *Dec 2023*

- Built a two-channel messaging app using **TCP**, C# GUI, and .NET Framework.

### **Shoe Sole from Photo** | *May 2023*

- Processed foot images with Python & **OpenCV** to create a 3D printable shoe sole in **Rhinoceros 7**, automated with **Grasshopper**.

---

## COMMUNITY ENGAGEMENT

### **CIP – Civic Involvement Project** | *Mar 2021*

- Recorded an audiobook as a civic project.