

IBRAHIM CAN OZDOGAN

AUTOMATION & IOT ENGINEER

34865 Anafartalar St., Istanbul | ozdoganic@gmail.com | +90 535 896 09 63



SUMMARY

Accomplished Automation & IoT Engineer with a strong foundation in electrical engineering and a passion for industrial digitalization. Graduated top of class with a 3.81 GPA from Istanbul Technical University, combining academic excellence with hands-on experience in software development, IIoT architectures, and smart manufacturing systems. Focused on delivering scalable, data-driven solutions that enhance efficiency, connectivity, and reliability across industrial environments.

PROFESSIONAL EXPERIENCE

Siemens Turkey, Automation Software and IoT Engineer Jul 2022 - Present

- Designed and delivered production data integration systems between PLCs, SCADA platforms, and MES environments.
- Developed Node-RED architectures, SQL-based data layers, and backend logic to enable scalable, real-time communication with cloud and on-premises platforms.
- Created control APIs and automation workflows in complex robotic welding environments.
- Implemented predictive maintenance systems using Grafana dashboards, Node-RED flows, and Linux-based IoT gateways.
- Acted as technical lead across multi-disciplinary teams and collaborated with production, software, and automation departments.

Akerasoft, Embedded Systems Intern Oct 2021 - Apr 2022

- Focused on embedded systems development and circuit design. Contributed to the firmware and hardware development of microcontroller-based systems such as alarm modules and custom game devices.
- Programmed in Embedded C and C++ on Linux-based platforms and assisted with schematic design and PCB layout using KiCad. Gained practical experience in device-level debugging, embedded documentation, and product-oriented system integration.

EDUCATION

Istanbul Technical University, M.Sc., Computer Engineering Sep 2024 - Present

- Coursework and research interests include IoT architectures, smart manufacturing systems, industrial automation software, and edge computing solutions. Actively working on advanced topics in factory data systems, system integration, and digital transformation in production environments.

Istanbul Technical University, B.Sc., Electrical Engineering Sep 2018 - Jun 2023

- Graduated top of class with a GPA of 3.81 / 4.00. Focused on power electronics, embedded systems, PLC/SCADA technologies, and industrial automation. Developed and led faculty-approved projects in data-driven control systems, energy monitoring, and production line digitalization. Built foundational knowledge in systems theory, control logic design, and industrial software integration.

SKILLS

- **Automation & Industrial Systems:** PLC Programming (TIA Portal, SCL), SCADA Systems (WinCC), OPC UA, PROFINET
- **IoT & Digitalization:** Node-RED, MQTT, IIoT Architectures, Cloud Integration, REST/SOAP APIs
- **Software Development:** Python, Embedded C, Linux Systems, Docker, Git
- **Electrical Engineering:** Power Electronics, Motor Drives, Energy Monitoring Systems

PROJECTS

MES Integration and Data Flow Architecture for Assembly Lines

Designed and delivered a production data integration system connecting assembly lines with MES infrastructure. Developed custom SQL and Python software layers for structured data flow, and integrated SCADA visualization for operational monitoring. Programmed PLC logic to support traceable machine behavior and created data exchange mechanisms for communicating with multiple controllers and third-party devices.

Cloud-Connected Line Management System for Welding Workshop

Designed and led a scalable data and control platform using Node-RED and custom API services to manage robotic welding lines in the automotive sector. Coordinated software architecture and team deployment activities. Programmed PLC-side interfaces and managed communication protocols to synchronize welding robots and line control systems with cloud infrastructure and production databases.

Predictive Maintenance System Using IoT Data Pipeline and Cloud Analytics

Built an IoT-based predictive maintenance solution by collecting and analyzing machine data from Linux-based edge devices. Used Node-RED to structure data pipelines and transmit to cloud platforms. Visualized key metrics using Grafana, and implemented SQL-based storage and querying. Enabled failure prediction and condition-based maintenance strategies to increase uptime and reduce costs.

LANGUAGES

- Turkish (native), English (fluent), Japanese (basic proficiency)

CERTIFICATIONS

- Siemens SIMATIC S7-1500 (TIA Portal)
- SIMATIC SCL Programming
- CCNA – Cisco Certified Network Associate