

# Emre CANCIOGLU

SOFTWARE DEVELOPER · DIGITAL TRANSFORMATION EXPERT

Kemal Atatürk Mah. 7822 Sok. 7/1, Menemen, İzmir, TÜRKİYE

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“Be the change that you want to see in the world.”

## Summary

Dynamic and results-driven Senior Operational Technologies Engineer with over 6 years of experience in developing and optimizing industrial systems through advanced technologies like IIoT, cloud computing, and data analytics. Expertise in leading digital transformation initiatives, achieving measurable improvements in operational efficiency, and reducing costs through the integration of modern automation systems. Proficient in full-stack development (Node.js, React), cloud infrastructure (AWS, Kubernetes), and industry protocols (OPC UA, MQTT, Kafka). Adept at driving business intelligence, data harmonization, and creating scalable solutions. Strong communicator with a bias for action and a passion for leveraging technology to solve complex problems and enhance production performance.

## Skills

<b>DevOps</b>	Amazon Web Service (AWS)   Docker   Kubernetes   Rancher   Terraform   Jenkins   NGINX   MS IIS   PM2   Git   GitHub Actions
<b>Back-end</b>	Lambda   Node.js   Express.js   Django   REST API   Kafka   MS SQL   MongoDB   PostgreSQL   DynamoDB
<b>Front-end</b>	Static Website Hosting (S3)   CloudFront   React   Redux   HTML5
<b>Programming</b>	JavaScript   Node.js   Python   PLC (Ladder Logic, Structured Text)
<b>Familiar</b>	Cloud Computing   Web Servers & Load Balancing   Event-Driven Architecture   CI/CD   Business Intelligence   Data Analytics   ML/AI   Unified Namespace   Digital Twin   Industrial Protocols   Agile
<b>Soft</b>	Problem Solving   Collaboration   Project Management   Bias for Action
<b>Languages</b>	Turkish   English

## Work Experiences

### INCI GS YUASA

Manisa, Türkiye

SENIOR OPERATIONAL TECHNOLOGIES (OT) ENGINEER

Dec 2022 - Present

- Accomplished **19%** increase in operational efficiency by reducing production cycle times, as measured by improved production throughput, through the implementation of a **Unified Namespace (UNS)** based on **ISA95** standards.
- Achieved **14%** improvement in data reliability by enhancing real-time data flow through the infrastructure optimization with **OPC UA, MQTT,** and **Kafka**, which also led to a 90% improvement in the response time to customer complaints.
- Reduced production monitoring delays by **32%**, as indicated by faster identification of production anomalies, by designing real-time dashboards in **Grafana** and **Node.js** for lead-acid battery manufacturing.
- Led cost-saving digital transformation initiatives, achieving a **57%** reduction in operational expenses, as reflected by decreased overhead costs, by modernizing **OT/ICS** systems and integrating automation technologies.

### DVD VALVES

Manisa, Türkiye

SOFTWARE DEVELOPMENT LEAD

Jan 2022 - Nov 2022

- Led a TEYDEB project (\$200k funding) managing embedded systems and **web service** integration for smart irrigation hydrants, using **Node.js** and **React**, resulting in **22%** improvement in reporting and accounting services efficiency.
- Developed control systems for irrigation, improving efficiency by **18%** using **DCS**, as demonstrated by optimized system response times.

### DVD VALVES

Manisa, Türkiye

SOFTWARE DEVELOPMENT ENGINEER

Jul 2019 - Dec 2021

- Integrated **IIoT** systems with the **Focas** library, improving CNC monitoring accuracy by **48%**, as evidenced by enhanced real-time visibility.
- Optimized **OEE** analysis tools, increasing efficiency by **12%**, by analyzing signals from **CNC, PLC,** and **web services**, leading to minimized machine idle times.

### DVD VALVES

Manisa, Türkiye

PART-TIME SOFTWARE DEVELOPMENT ENGINEER

Jul 2018 - Jul 2019

- Achieved **3x faster production cycle** by automating the welding process with **PLC** and **HMI**, as realized by shortened cycle time.

### DIMES

İzmir, Türkiye

PART-TIME PROJECT ENGINEER

Jul 2017 - Jun 2018

- Enhanced efficiency by **4%** through real-time monitoring with **PLC** and **IIoT**, as validated by the reduction in maintenance needs.

# Projects

## Maestro

Manisa, Türkiye

PROJECT LEADER

Dec 2023 – Present

- Led a team of **20 professionals** to develop a web-based digital traceability system, enhancing traceability by **40%** through integration of **SAP S/4 HANA, Energy Management, PLC** systems, and **IIoT** devices.
- Accelerated reporting time by **60%**, generating annual savings of **\$156K** by utilizing **Kafka** for data streaming, **Node.js**, and **React**.

## Valve Control & Monitoring

Italy, Dubai, Colombia

SOFTWARE DEVELOPER

May 2022 – Oct 2022

- Led design and development of a control system for hydraulic butterfly valves in large-scale water projects reducing project costs by **30%** and saving **\$80k**.

# Honors & Awards

## DOMESTIC

- |      |  |                        |
|------|--|------------------------|
| 2024 | <b>1<sup>st</sup> Place</b> , Cevdet İnci Incentive Awards     | <i>İzmir, Türkiye</i>  |
| 2024 | <b>Innovation Special Award</b> , Cevdet İnci Incentive Awards | <i>İzmir, Türkiye</i>  |
| 2024 | <b>1<sup>st</sup> Place</b> , İnci GS Yuasa Stars              | <i>Manisa, Türkiye</i> |
| 2023 | <b>1<sup>st</sup> Place</b> , Cevdet İnci Incentive Awards     | <i>İzmir, Türkiye</i>  |

# Presentations & Publications

## R&D & Innovation 2024

Manisa, Türkiye

WRITER | RESEARCHER

Dec 2024

- Data Integration for Industry 4.0 and IIoT: Unified Namespace-Based Digital Transformation with **MQTT, OPC UA**, and **Node.js**.

## Career Days

*İzmir, Türkiye*

SPEAKER

May 2023

- Connecting Students with Industry Leaders for Insights and Opportunities.

## International Conference of Applied Sciences, Engineering, and Mathematics

*Macedonia*

WRITER | RESEARCHER

Oct 2021

- Fault Detection and Diagnosis in Process Control Systems using **k-Nearest Neighbor** Method from Poincaré Plot Measurements.

## Human-Computer Interaction Optimization and Robotic Applications

*Türkiye*

WRITER | RESEARCHER

Jun 2021

- Fault Detection and Diagnosis in Process Control Systems using **Machine Learning** Methods from Poincaré Plot Measurements.

## International Medical Device Conference

*Antalya, Türkiye*

WRITER | RESEARCHER

Sep 2020

- Long-Term and Short-Term Memory**-Based Heart Rate Analysis and Classification.

# Certifications

- Quality Management and Improvement:** Failure Modes and Effects Analysis | Statistical Process Control | Problem-Solving Techniques
- Data Management and Analysis:** SQL Database Management
- Automation and Control Systems:** PLC Programming with S7-1200

# Educations

## Katip Celebi University

*İzmir, Türkiye*

MSC. IN ELECTRICAL & ELECTRONICS ENGINEERING

Sep 2019 - Jun 2022

**Coursework:** Statistical Process Control | Data Acquisition and Control | Applied Machine Learning | Artificial Neural Networks.

**Thesis:** Fault Detection and Diagnosis of the Tennessee Eastman Process Using Poincaré Plot and ML Based on Statistical Analysis.

## Katip Celebi University

*İzmir, Türkiye*

BSC. IN ELECTRICAL & ELECTRONICS ENGINEERING

Sep 2014 - Jul 2019

**Coursework:** Process Control and Instrumentation | Optimization in Engineering | Industrial Automation | Signals and Systems.

**Thesis:** Design of a Cylindrical Welding and Polishing Machine with Programmable Logic Controller-Based Human-Machine Interface Control.