Omer Erencan Dural

R&D Engineer interested in robotics, embedded systems and design thinking.

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Work Experience

- **NTT Data Italia** – *Advanced R&D Systems Engineer* (Italy, September 2023 - present)
  - Designed an embedded cockpit prototype from concept to proof-of-concept, including literature review, microcontroller and component selection, and software architecture definition.
  - Developed embedded software using Zephyr RTOS and VS Code toolchains, enabling modular, scalable firmware.
  - Acting as an Advanced Driver Assistance Systems (ADAS) Problem Manager: managed and coordinated ticket resolution process for all ADAS related issues for the assigned projects.
  - Support and document the monitoring activity by creating weekly statistics reports and presentations, with the final aim of showing the current project state and forecast to the department managers.
  - Served as Function Owner for an Audi infotainment application through Italdesign Giugiaro: analyzed requirements, defined system interfaces, and supported backend connectivity (V2I).
  - Coordinated cross-department workshops, managed supplier communication, and authored technical documentation and reports.
  - Oversaw updates to test facilities and planned hardware/software validation procedures.

- **METIS PR** – *Intern* (Italy, April 2023)
  - Created media briefs for various events and installations and facilitate client-press relations.
  - Organized and planned client events during Milan Design Week 2023.
  - Oversaw the client-media interactions during Salone del Mobile.

- **Haier Europe** – *Industrialization Engineer Intern* (Italy, September 2022 – February 2023)
  - Aided the industrialization team in bridging the gap between the engineering and manufacturing departments.
  - Analyzed PCB schematics, translated the schematics into requirements, and established groundwork with the supplier and the engineering teams.
  - Kept track of ongoing Automated In-Circuit Test Equipment projects, provided documentation and organizational help during installation of the bed-of-nails testing devices.

- **ASELSAN** – *R&D Intern* (Turkey, June 2018 – July 2018)
  - Developed an image stabilization system through Kalman Filter and PID control for an end actuator on a robotic arm using an IMU and Arduino.

- **TUSAS Engine Industries Inc.** – Production Intern (Turkey, June 2017 – July 2017)
  - Analyzed advanced manufacturing processes of the static components of aeronautical engines.

- **ODTU TEKNOKENT Directorate of Entrepreneurship** – *Intern* (Turkey, August 2016 – September 2016)
  - Assisted the directorate with the organization of the YFYI start-up acceleration program.
  - Facilitated communication and logistics between start-ups, mentors, and the directorate.

Education
- **Politecnico di Milano**, M. Sc. in Mechanical Engineering, Mechatronics and Robotics Track (2019 – 2023) **101/110**

- Thesis Topic: Teleoperation of a 7 DoF Robot with a Wearable Device Capable of Multimodal Feedback (link)
- List of Elective Courses Taken: Robotic Systems Design, Automatic Control A, Mechatronic Systems and Laboratory A, Electrical Drives for Industry and Trans- port Applications, Critical Thinking
- **Middle East Technical University (METU)**, B. Sc. in Mechanical Engineering (2015 – 2019) **3.50/4.00**
  - Final Project: Automatic Pet Feeder – Actualized the entire electrical system of an automatic pet food dispenser with a complete circuit board design and an intuitive user interface utilizing the state machine concept with an Arduino and basic electronic modules.
  - List of Elective Courses Taken: Steam Generator and Heat Exchanger Design, Mechanical Vibrations, Design of Control Systems, Fundamentals of Micro-Electromechanical Systems, Mechatronic
  - Components and Instruments, Mechatronic Design
  - Extracurricular Activities:
    - METU Mechanical Engineering and Innovation Society: Active Member (2015 – 2019), Secretary General (2017–2018)
    - METU Foreign Policy and International Relations Club: EuroSimA Public Relations & Delegate Affairs (2015 – 2017)

Technical Skills

- **Embedded Systems:**
  - Zephyr RTOS,
  - ROS2,
  - Embedded Linux,
  - Raspberry Pi,
  - Arduino
  - NXP Microcontrollers
- **Programming:**
  - C,
  - Python,
  - MATLAB
- **Design & Prototyping:**
  - Fusion 360,
  - Eagle CAD,
  - Processing,
  - Unity 3D,
  - FDM (3D Printing),
  - Affinity Suite
- **Tools:**
  - Linux Command Line,
  - Atlassian Suite,
  - IBM DOORS,
  - Microsoft Office

Languages

- Turkish: Native tongue
- English: C2
- Italian: C1
- German: A2