

# Gergely Bilkei-Gorzo

## Specialist Embedded Systems



### Personal Summary:

I am an automation engineer currently working as a research assistant and PhD candidate at the Automotive Institute of RWTH Aachen University. I am passionate about driving innovation in software and engineering projects, with a strong focus on efficiency, quality, and impactful results.

### Skills

- Very good in C, Matlab/Simulink and embedded systems (firmware, RTOS, bootloader, protocols, bus communication, circuit design)
- Good in Python and C++
- Good in containerisation implementations using POSIX functions
- Experienced in hardware testing for series production designs
- Experienced in system integration for prototype vehicles
- Very good knowledge in Steer-by-Wire systems
- basics in container development with docker
- experience in personnel management
- Languages:
  - Hungarian: Native
  - German: Bilingual Proficiency
  - English: Professional Working Proficiency

### Work Experience

#### 2018 - present | Research Assistant/PhD candidate

##### Institute for Automotive Engineering

- Lecturer for various industry partners
- Worked on different hardware designs and layouts for prototype and series production hardware
- Performed hardware tests and consulted industry partner on recommended changes
- Developed software for various embedded platforms for integration in prototype vehicles
- responsible person to the customer

#### 2024 - present | Specialist Embedded System

##### Institute for Automotive Engineering

- Lecturer for various industry partners
- Development of a container management system for automotive applications

### Education

#### 2016 - 2018 | Automation Engineering (RWTH Aachen)

- Master Thesis: Smart Power Distribution Unit for 48V automotive power net
- Student assistant for 400V to 48V DC/DC converter design and control algorithm

#### 2009 - 2015 | Mechanical Engineering, specialization Automotive (RWTH Aachen)

### Contact

Gergely Bilkei-Gorzo  
Vaalser Str. 150A, 52074 Aachen  
Phone: +49 15122981347  
Email: gergelybilkei@gmail.com

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## Specialist Embedded Systems

### Project Overview

Integration of a Sidestick Steering device into a Ferrari 458 Steer-by-Wire prototype



2019

Software Development for a dSPACE AutoBox analog sensor extension board



2018

Hardware testing, hardware design consulting, layouting, test software design and implementation for a serial production automotive ECU



2021

Development of a bootloader, ethernet driver, and port of FreeRTOS, LWIP and PTP for an automotive zone ECU used in an autonomous Shuttle (UNICARagil)



2020

Hardware design and software development for a Steer-by-Wire system for both hand and wheel actuation, including motor control algorithm, function software, sensor data processing, safety and steering model. Integration and testing in an AMG GT prototype vehicle.



2023

Hardware design and software development for a Steer-by-Wire system including motor control algorithm, function software, sensor data processing and safety. Integration into a VW ID3 prototype vehicle



2022

Development of an application management system that enables to utilize the unused computing power of autonomous vehicles for external application (doctor thesis topic) in the project AUTOtech.agil



2023