

# Digitalisation of a coffee machine for intelligent energy monitoring using AI and cloud management

## Target Group:

- Praxisprojekt + BA • Master Mechatronics Project
- Pro2 • Master-Thesis

## Project description:

In today's world of smart devices, it is important to digitise machines, equipment and appliances to realise energy efficiency, operational data and smart analytics. This project aims to transform a standard coffee machine through the use of 3D printing technology, PCB design, artificial intelligence and cloud computing into a smart appliance that monitors and analyses its energy consumption and automatically evaluates operating data.

## What you can expect:

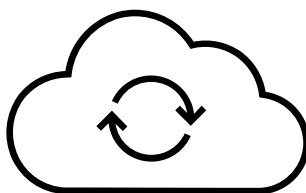
- Design and creation of 3D-printed attachments equipped with sensors and electronic components for energy monitoring.
- Development of machine learning algorithms hosted in the cloud to analyse the collected data and identify patterns in energy consumption.

## What you should bring:

- Basics in object-orientated programming.
- Interest in IoT topics.
- Interest in PCB design.

Artificial Intelligence

Machine Learning



Deep Learning



## Get in touch:

**Prof. Dr.-Ing. Jörg F. Wollert**  
Raum 02 303  
Telefon +49.241.6009 52503  
Email [wollert@fh-aachen.de](mailto:wollert@fh-aachen.de)

**M.Sc. Johannes Hug**  
Raum 03 040  
E-Mail [hug@fh-aachen.de](mailto:hug@fh-aachen.de)