Car gauge using Arduino UNO R3 and MCP2515

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Course: Introduction to Robotics

Design

The main purpose of this project was to create a diy car gauge. This project relies on MCP2515 for CAN communication, a UNO R3 for the brains and an ST7789 TFT display to show, what the car responds with.

Reflection

I wanted to do this project for quite a while now. At first I tried the cheap bluetooth ELM327, but that did not work, so I switched to directly using the CAN bus and that works quite well, so I am really happy about that. In the future i would really like to improve this project, since car gauges are not cheap.

Tests

This project was fun to test, the interesting part was seeing to which PID's my car responds.

Future improvements

In the future i would like to use ELM327 protocol, in order to make this gauge work with older cars (before 2008), since i own two of them. I would also like to use ESP32 instead of UNO R3, since it natively supports CAN and only needs a tranceiver (so it would be cheaper also).