IVL HM
Intelligent Vehicles Lab
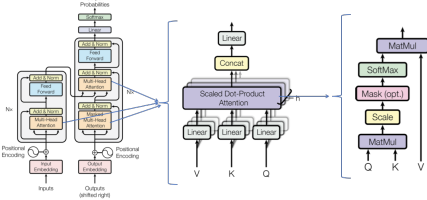
Thesis
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Figure 1: Schematics of self-attention from the ground-breaking paper "Attention is all you need".

Figure 2: Agile-X Scout Mini with LiDAR and CU. [global.agilex.ai]

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Bachelor / Master Thesis - Large Language Model

Description

- The Intelligent Vehicles (IV)-Lab is looking for a **Bachelor / Master Thesis Student (m/f/d)** to support research in the field of autonomous driving starting in the coming winter semester.

- Large Language Models (LLM), such as GPT, hold promising contributions for our research. We would like to **implement our own LLM** in our Laboratory with your help.

Your Project

- Experiment with different LLM architectures in terms of efficiency and performance (see Figure 1)

- Examine the implications of training an LLM from scratch vs. fine-tuning a pre-trained model

- Prepare the LLM for its use in later research projects, like controlling an AgileX robot with natural language (see Figure 2)

- **Goal**: Create a secure and private LLM that can be used in combination with other research projects

Your Profile

- Willingness to learn and interest in the topic of autonomous driving

- Ability to work independently, conscientiously, and accurately

- Previous experience with Python is required

- Previous experiences with Linux, Bash, and git are a plus

What we offer

- Gaining first experiences in one of the most promising technical fields of modern times

- Supervision and close cooperation with a PhD candidate in the corresponding field

- Optional extension to an SHK-position with flat-rate payment

Does this appeal to you? Are you interested in the field of autonomous driving? Then reach out to us via mail and send a short introduction, your current grade report, and a CV with a photo.