

Autonomous Driving Recruitment Task

1. Objective

The main goal of this task is to understand your level regarding software development, understanding in autonomous systems and vehicles in general. It is not expected for you to know everything, but it is required that you have the desire to learn more and have a certain level of autonomy when searching for a certain subject.

2. Task

1. Make a fictional system for sensor reading. The system is composed by a sensor simulating software, which transmits random 32-bit floating point values at a 10 Hz and can have “N” instances at runtime, and a sensor reading software. The sensor reading software reads data from all sensors (via a UDP socket or pipe) with a thread per sensor. Both the sensor simulators and the sensor reading software must log the current timestamp and transmitted/received value. Before terminating the sensor reading software (SIGTERM), log the average values of each sensor. You can use any programming language of your liking. Note: consider race conditions and high contention.

3. Submission

If you were not able to complete a question on its entirety, please report what your difficulty in the document was and/or sources that you researched.

You must create a document with images explaining your thought process, **in English**.

DEADLINE: 7 days after receiving the task – Submit your assignment to the team's email: fsipleiria@ipleiria.pt

Feel free to contact regarding any doubts:

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