Instructions

Tesla Autopilot Computer Vision Challenge

You will be given a test with five problems. The problems will be of a geometric and numerical nature. The test is expected to be taken over the course of one day. Some of the problems can be solved analytically, but for most problems it is expected that you will choose to write a program to calculate the answer. As long as the answer is correct and you provide the answer based on a solution you worked out on your own, any method is as good as any other. The test does not rely on elaborate factual knowledge or formulas for which it would help you to search the web. The test is designed to check high fluency and ability with numerical and geometric programming.

Make sure that before you start the test you have access to a functional version of your programming environment of choice. The test is agnostic to the choice of programming environment, and no elaborate methods for input or output will be required. However, the programming environment should allow you to efficiently write numerical algorithm code and use numerical functions such as for example trigonometric functions. Examples of good environments would be any C/C++ development environment, numerical python, or matlab. Any similar environment is acceptable, but you will need one where you are highly fluent. You will likely also want pen and scratch paper available as you work to understand the problem formulations.

The answers will be simple floating point numbers or digit sequences, and your output back to us will simply be those answers, not a full description of your method. The test is 'open book' in the sense that we can and will not prevent you from looking up concepts or formulas, and doing so is 'fair game'. Our only ask is that you keep the test to yourself and work out the solutions on your own. We will verify your understanding of the solution methods you used should you make it to an on-site interview.

Good Luck!

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September 23, 2015