
Dependable Systems

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Training Exercises C5 (Society and Sustainability)

Issue 1: *Exchanging Arguments*

Take a look at the following claim:

> We should forbid the automation of certain tasks.

(a) Write an argument in extended standard form that you believe to be sound (i) for the above claim or (ii) against the above claim or (iii) for a reasonable conditionalization thereof. Give additional soundness reasoning, if necessary.

(b) Now write another two arguments, namely (i) and (ii) if you did (iii) before, (i) and (iii) if you did (ii) before, or (ii) and (iii) if you did (i) before. Make sure that your arguments are as strong as they possibly can be. Again, give additional soundness reasoning if necessary. Try to be convincing!

(c) Show all three of your arguments to your group members. (Make sure to shuffle your arguments such that they cannot make inferences based on the order.) Look at the arguments of your group members and try to attack them. Can you guess which argument the author believed to be sound?

(d) Discuss your arguments and their attacks.

(e) Do some of the objections have a point? If yes, try to improve your argument from (a) such that it is not vulnerable against any of the attacks that were proposed. If not, give reason why they are not suitable attacks.

Issue 2: *UN Sustainability Goals*

Take a look at the UN Sustainable Development Goals: `https://www.un.org/sustainabledevelopment/sustainable-development-goals/`

(a) For which goals can computer science in general be of help and how?

(b) And to which of those goals can you personally contribute as a private individual or as a computer scientist (though maybe only slightly)?

Issue 3: *Precautionary Principle*

The Precautionary Principle tells us that we sometimes should not opt for the option with the highest expected utility but for an option that avoids possibly grave dangers. Think about the following questions:

(a) Is following the Precautionary Principle morally permissible in a situation where we believe that grave dangers might be possible? Is it morally obligatory?

(b) Is following the Precautionary Principle rational in a situation where we believe that grave dangers might be possible?

(c) Are we responsible for a very bad outcome that is a consequence of our action, given that we deliberately chose the option with the highest expected utility and not one of the options that would have been in line with the Precautionary Principle?

(d) When could the Precautionary Principle be relevant in computer science? Think of examples.