1. What are the limitations of first-order logic as a language for KRR? Show some examples of scenarios/properties that cannot be modelled well with first-order logics. Describe what are the obstacles and possible solutions; what are alternative languages / models that can be used?
2. We mentioned during lectures that satisfiability of propositional logic formulas is NP-hard; explain what does NP-hardness mean (preferably use Turing machines to provide this explanation). Describe also what is the P computational complexity class, what is P vs NP problem, and why it is so important. What would P=NP imply and what would P!=NP imply?
3. Logic vs machine learning, aka symbolic (like first order or description logics) vs sub-symbolic AI (machine learning); compare methodologies behind these approaches and properties of these methods. Present pros and cons, of both approaches, as well as their applications. How could we combine them and use best of both of these worlds?
4. Underfitting and overfitting in ML. We have touched this topic during the course, but try to provide more information about them – when do they occur, how to detect them, and how to prevent them in practice. You can prepare some experiments showing these phenomena and how you would overcome them in practice.

- Shorter is often better – present only essential things. It is a short presentation, so we do not need an outline of presentation, too much text on slides, or lengthy introductions.
- Focus from the beginning on the main message of the presentation.
- Try to be clear and to the point.
- Try to be creative instead of repeating what was already presented during the course.
- Imagine that you would be listening to the presentation – would it be interesting for you or would you be bored?