Paper Reading Template

AI-For-NLP Course Group

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| Date | 2019/07/05 | |
| Title | COMPUTING MACHINERY AND INTELLIGENCE | |
| Author | A. M. Turing | |
| Question/Task | Description | You Answer |
| 1. Classify this paper | Is this paper pragmatic or theoretical?  Is this paper on science or engineering? | Theoretical、science |
| 2. Brief Summary | Using the as short as possible to summarize the paper content. | Summary :  Argumenting the machine can "impersonate" people's thinking activities, and at the same time, argue in both aspects, both to refute the contempt for the ability of the machine, and to disagree with the thinking of the machine and the thoughts and consciousness of the person can be directly compared. |
| 3. Outline | Outlining the content as multiply parts.  For example, for one paper, you may outline the content as following:  1. Background  2. The other Researcher’s method  …  8. Future Planning  And explain how does these outlines work together to make this article completed. | Outline：  1, imitate the game  2, evaluation of new issues  3, the machine in the game  4, digital computer  5, the versatility of digital computers  6, the opposite point of view of the main problem  7, learning machine  It defines and explains in detail the artificial intelligence and its research purposes, the development direction, and demonstrates that the machine can “impersonate” people's thinking activities, and simultaneously debates on both sides, both refusing the contempt for the ability of the machine and disagreeing with the thinking and the machine of the machine. The thoughts and consciousness can be directly compared. |
| 4. Mainly Issue | What is the issue that author want to solve? | It is suspected that the machine can "make" the human thinking activities can be realized, explain and define the research purpose and development direction of the artificial intelligence machine. |
| 5. Find the difficult or important words. | Find what words you are not understood and explain it by yourself.  Find important words in this article. | Subcritical state and supercritical。As Turing said:  The majority of them seem to  be "subcritical," i.e., to correspond in this analogy to piles of subcritical size. An idea  presented to such a mind will on average give rise to less than one idea in reply. A  smallish proportion are supercritical. An idea presented to such a mind that may give rise  to a whole "theory" consisting of secondary, tertiary and more remote ideas. Animals  minds seem to be very definitely subcritical. |
| 6. Find the difficult sentences confusing you and explain what they mean. | 找出文中你不太懂的句子，试着解释他，最好用另外一种解释方法解释。 不要玩文字游戏。  例如， 《纯理性批判》里有一句话“除了实际存在的事物，没有任何东西能发生作用“。 如果你解释成“如果某个东西不存在，那么它就不能发生作用“，这就属于玩文字游戏。比较合理的解释一个例子是”只靠可能会下的雨，青草是不会生长的“或“只靠可能有的存款，一个人的账号是不可能增加的“。 | Many  people think that a very abstract activity, like the playing of chess, would be best. It can  also be maintained that it is best to provide the machine with the best sense organs that  money can buy, and then teach it to understand and speak English. This process could  follow the normal teaching of a child. Things would be pointed out and named, etc.  Again I do not know what the right answer is, but I think both approaches should be tried.  Explanation：In fact, Turing's thinking is not outdated. The two roads in artificial intelligence research always exist. On the one hand, in the name of “connectionism”, it represents the party that attaches importance to physical relations (hardware), on the other hand, "Symbolicism" is a party that attaches importance to algorithms (software). What is important is not the confrontation between the two parties, but the difficulties that both sides have insurmountable, especially the ideological confusion that the two sides cannot communicate. |
| 7. Find the main sentences author written. | Find out sentences which could express the intention of author mostly. | 1、我们把问题分为两部分：儿童程序和教育过程，两者密切相关。我们不能指望一下就找到一个好的儿童机器，我们必须对一个这样的机器进行教育试验，看其学习效果，然后再试另外一个，判断哪个更好。  2、我们通常将惩罚和奖励与教学过程联系在一起，一些简单的儿童机器可以按照这种原则来构建或编程，使得遭到惩罚的事件不大可能重复，而受到奖励的事件则会增加重复的可能性。我已经用一台这样的儿童机器做了一些实验，并成功地教会了它了几件事情，但其教育方法太不正规以致不能被认为是真正成功的。  3、我们希望机器最终能和人在所有纯智力领域竞争。  4、We can only see a short distance ahead, but we can see plenty there that needs to be done. |
| 8. What have been solved and what not have been solved? | What problems or issues the author have solved?  What problems or issues the author haven’t solved? | The author defines and explains in detail the artificial intelligence and its research purposes, the direction of development. But for my own ideas, due to conditions, there is no specific practice argument. |
| 9. Rethink of the paper | Can you explain the paper main content to others?  Can you explain the paper to your wife/husband?  Can you explain the paper to a kindergarten pupil?  This answer ***cannot be Yes/No simply.*** *Please write the explanation with integrity.* | The shallow one should be able to explain. First of all, from the beginning of the imitation game, and how Turing scientists define and explain in detail the artificial intelligence and its research purposes, the direction of development. Keywords: connectionism, symbolism, learning machine. |
| 10. Which parts do you agree with the author?  Why do you agree with these? | Find out the opinions of author that you agree with.  Give the reason why do you agree with. | Through continuous learning of church machine practice, through punishment and reward as part of the teaching process. The current deep learning practice proves that the author is correct. |
| 11. Which parts do you not agree with the author? | List the parts or opinions that you do not agree with author. | Random methods may be better than system methods |
| 12. Why do you not agree with? | Classify each answer of question 11 as following types:  1. uninformed: 信息不足，必要的信息没有给到；  2. Misinformed: 论点与实事相反或不切合；  3. Logic Error; 逻辑错误，例如马基雅维的《君主论》里边：  所有的政府，不论新或旧，主要的维持基础在法律，如果这个政府没有很好的武装力量，就不会有良好的法律，也就是说，只要政府有很好的武装力量，就会有好的法律。  里边的逻辑错误在于“ 政府有很好的武装力量“ 应该是”有好的法律的“ 必要不重复条件，依照所述的逻辑，如果有好的法律，那么肯定有好的”武装“，但是有好的”武装“并不一定有好的法律。  4. Uncompleted Analysis; | Because the author uses random methods to generate repetitive phenomena, affecting operational efficiency. We should use statistical methods to reduce random errors, reduce the interference factors of the model, and improve accuracy.  Also uninformed, Uncompleted, Logic Error, etc. |
| 13. Is this article helpful to you?  How can you use these knowledges in your life or in future? | 简述这篇文章是否对你有用，对你以后哪些场景下回使用到？ | Yes, it defines and explains in detail the artificial intelligence and its research purposes, the direction of development, and guesses that the machine can “make” human thinking activities. Can be used as the preferred reference for writing graduation thesis. With this kind of thinking to delve into the machine learning and deep learning related algorithms. |