9980 / 01 Cambridge International Project Qualification Project Proposal Form

Centre number

Centre name

Candidate number

Candidate name   Example B

Examination series (MM/YY)

Research question:

Is Artificial General Intelligence going to lead to a utopian era or a dystopian hysteria?

Briefly explain why you have chosen this question and topic.

Despite being a hypothetical situation, the topic of human level AI coming to fruition and impacting humanity has been the concept of strong debate in the recent years. However, it appears that the opinions of how AGI might shape our world could not be any more strikingly contradictory and confusing; "contradictory" as there seems to be no grey zone — AGI would either lead us to utopia or to dystopia — and "confusing" as there are reputable prominent figures, being in close proximity to the world of technology, on both sides of the argument.

Through this research I plan on coming across the possible impacts that AGI might have on humanity, which might lead to any one of the two aforementioned scenarios, and analyse those impacts in greater depth so as to know in which direction we would like the "AI progress" wheels to be steered.

Outline the research method(s) you will use and explain how this will help you to answer your research question.

The methodology I plan to using to conduct this research is a literature review through desk research. This is because the topic is hypothetical, and can be easily affected by anthropomorphism and sentimental values so experiments, interviews and survey-like methods seem unsuitable, eliminating quantitative or qualitative or primary research methods.

In the introduction I plan to provide a justification for the research question and its aims along with an overall layout of the research followed by a brief history of AI. After that, I

shall be inspecting the impacts that AGI might bring.

To begin with, I shall be dealing with the impacts on the job sector. The possibility of AGI taking away many jobs has come under close inspection; some reply with fear, whereas others say that it would augment, not replace us so I will be looking at both sides of the debate and trying to analyse and evaluate the situation.

I shall also be looking at AGI's impacts on human freedom and safety where some argue that it might lead to extreme surveillance and loss of privacy whilst others say it would lead to safer and violence free societies.

There are also scenarios of AGI taking science forward by allowing space exploration, better medical diagnosis and breakthroughs in medical cures of fatal diseases, and providing ideas that might take humans ages to come up with. If AGI is not developed, it is argued that humanity might be deprived of such benefiting outcomes.

However, there are possible cases of totalitarian governments rising and misusing AGI, and wars breaking out due to AGI usage or simply because of a malfunction on the AGI's part. Here, it is argued that if AGI is developed it would lead humanity to unwanted bloodshed and misery.

I shall be discussing all of these, using the opinions of experts supporting both of the sides, and would analyse and evaluate them as well.

Finally, I would discuss the situation of AGI evolving to ASI leading to singularity, giving rise to fear of "control loss", rather than "control gain". Closely associated with this are issues of goal alignments which I shall explore as well.

From all of these discussions I shall weigh up the possibilities and hope to reach a conclusion on how future with AGI might look like and will try to provide impartial and logical inputs where suitable.

Outline the main sources of information you have identified for the project.

Possible source list:
- https://www.wired.com/2016/05/google-alpha-go-ai/
- http://www.aleph.se/andart/archives/2011/02/why_we_should_fear_the_paperclipper.html
- https://www.researchgate.net/publication/338567228
- https://www.cser.ac.uk/research/risks-from-artificial-intelligence/
- https://www.nickbostrom.com/superintelligentwill.pdf
- https://openresearch-repository.anu.edu.au/bitstream/1885/164227/1/Tom%20Everitt%20Thesis%202018.pdf
- https://link.springer.com/article/10.1007/s00146-019-00887-x
- https://www.entrepreneur.com/article/357593
- https://www.huffpost.com/entry/artificial-intelligence_b_5174265
- https://journals.sagepub.com/doi/10.1177/1094670517752459

- https://www.tandfonline.com/doi/full/10.1080/0952813X.2016.1186228
- https://www.ted.com/talks/sam_harris_can_we_build_ai_without_losing_control_over_it
- Artificial_Intelligence:_A_Modern_Approach by Stuart_J._Russell_and_Peter_Norvig
- The_Fourth_Age:_Smart_Robots,_Conscious_Computers_and_the_Future_of_Humanity by Bryon_Reese
- OUR_FINAL_INVENTION:_ARTIFICIAL_INTELLIGENCE_AND_THE_END_OF_THE_HUMAN_ERA by James_Barrat
- The_Second_Machine_Age:_Work_Progress_and_Prosperity_in_a_Time_of_Brilliant_Technologies by ERIK_BRYNJOLFSSON_ANDREW_MCAFEE
- Artificial_Intelligence_Illuminated by Ben_Coppin

LIFE_3.0:_Being_Human_in_the_Age_of_Artificial_Intelligence by Max_Tegmark

Teacher feedback

Teacher name

Date of comments

Comments

Your proposal has potential but would benefit from a tighter focus, perhaps on a smaller number of the different issues you raise in the proposal. Currently it is a very broad project which may make it hard to manage and may make it difficult to go into enough depth on the interesting issues you raise in the proposal. It would help you to refine your title so you can progress with your project with confidence and have the best chance of achieving success.

You have included some good detail on the research method you have chosen, and why you did so. However, the sources you have listed are not necessarily of the academic standard required; you should ensure you also include some academic sources. In addition, the sources you have listed are not fully referenced.

Here are some points to give you a little more detail:

Your title is rather broad in that it names Artificial General Intelligence. This is a very large area which could make gathering your research, distilling what you discover and writing your 5000 report quite difficult. Your outline refers to a wide range of issues you intend to explore which may generate a huge amount of evidence for you to sort through. This may also mean you have to spend a lot of time on your project and, however interesting it may be, you do need to allocate your time fairly between your project and your other subjects and commitments.

Your chosen research method seems to be an appropriate way to answer your question and your outline justifies your choice in an interesting and thoughtful way. However, your outline does not explain what kind of literature review you will use other than, 'the opinions of experts' you should learn about the different approaches to literature reviews and decide on which approach you will use and how you will identify sources to review.

A literature review appears to be a feasible method for your project and, given the nature of the topic area, it seems likely that there will be plenty of material. Indeed, you may find there is a lot of material to sift and so, in your planning, it may help you to set up a personal referencing system to manage the sources you access; this can be part of the log which accompanies your project.

You have listed plenty of sources in your outline but many of the web links are to media or more popular based sources; these can provide useful background or context but you should not rely on such sources as the basis of arguments in your project.

Your proposal is suitable in that you have chosen a topical area to research and there is likely to be plenty of evidence on all sides to support a report which is both analytical and evaluative. However, your range is likely to prove problematic and so it would be wise, after some preliminary research, to focus on a smaller number of issues within your topic which you can then explore in greater depth.

Approved ☐

Approved (with proviso) ☒

Not approved (resubmission required) ☐