# Team 2 Implications of AI -Executive Summary

This project provides an overview of the emergent artificial intelligence (AI) technology. While recognizing the positive effects of AI on human society, it puts an emphasis on the possible threats and hazards of AI to human life. Aimed at the negative impacts of AI, it illustrates the obligations of engineers to cope with AI technology and eliminate its detriments to the whole world.

In the Section I, it gives the general background of artificial intelligence technology, including the origin of the term "artificial intelligence", which stemmed from an ambitious but uncompleted study on AI. The two camps of either having a rational agent or a cognitive model are also discussed, along with the foundations that help shape the field.

Section II is a brief introduction to the overall project report, illustrating the objective it's aimed at achieving--making recommendations on how engineers could exploit AI technology appropriately.

In the Section III, it gives an introduction of the existing policies of several major countries on AI technology, such as US, EU, Japan and China. By comparison among all these countries' policies, we can find a common malady within them--lack of a systematic regulation on AI. Next, it points out the limitations of AI in many aspects, like ethical and moral problems, burdensome cost, limited capability, poor creativity and so on. By considering about the limitations, we can see that AI technology is actually not all-powerful.

In the Section IV, ethical and moral issues of artificial intelligence are introduced. Artificial intelligence has a slew of benefits such as increased automation, applications in various fields such as education, media, digital assistants, etc. Artificial intelligence also runs the risk of a plethora of ethical and moral issues including loss of jobs to automation, discrimination/bias, security, possible unintended consequences of AI, AI becoming more intelligent than humans, etc which need to be investigated as AI continues to grow at a fast pace.

In the Section V, the report indicates 4 main drivers of the development of AI technology--Business, Government or Military, Society, Engineers or Developers. For Business, there are significant investments being made in AI in order to capture market share in potential growth areas, as well as streamline processes by reducing human involvement. In terms of the Government or Military, the Government provides legislation that affects the progression of AI, while the Military has a large amount of funding for further research in AI. In the aspect of Society, the public will make sure that the advancement of AI meets social needs and doesn't harm public safety. Engineers and developers are the people creating the technology for AI and have a vested interested in the growth of the field as potential employment opportunities could arise, but they also need to evaluate when technology becomes too advanced and could potentially start replacing engineers.

In the Section VI, it describes the close relevance between AI technology and Engineering. Initially, AI has a profound influence on engineering profession in many aspects, including Machine Learning, Natural Language Processing, Disease Treatment, etc. Secondly, engineers from various domains are continuously making a great contribution to the advancement of AI technology. The tasks that engineers take on in developing AI include research, machine learning, data analysis and so on. Then, engineers have to undertake their responsibilities to properly develop AI and prevent unintended or detrimental consequences it may bring about, e.g. ethical issues. Finally, it's foreseeable that the close relationship between AI and Engineering will make both of them have a bright prospect.

Section VII draws the conclusions of this project report. At the same time as it admits the benefits of developing AI technology, it generalizes a series of potential issues underlying the progression of AI. At last, aimed at these problems, it gives the corresponding solution--the collaboration between engineers and other parts of a society to eliminate the possible risks of AI.