# Research Project:
# Closing the social and economic gaps through beneficial AI and AGI development

It is our belief that the goal of Artificial Intelligence (AI) must be to support humanity. To ensure this is the case, this research priority will seek to clearly analyze, understand, and make successful policy recommendations on the social and economic impacts of AI.

We do not know the likely extent with which AI will impact on social and economic institutions but it could have a major negative consequence if, as Robin Hanson (2001) indicates, *"Artificial Intelligence and Robotics are long-standing fields of engineering whose explicit goals are to develop principles of design to eventually enable machines to accomplish all human cognitive and physical tasks."* Whilst it is the case that intelligent machines will be used initially to complement humans at work in cognitive and physical tasks, once machines can do a fraction of the tasks that humans do, they may start to displace workers at a significant rate.

Machines have been substituting human labor for centuries, yet, historically, technological changes have been associated with productivity growth and expanding rather than contracting total employment and with raising earnings.

Nevertheless, commentators such as Andrew Haldane (2015), Chief Economist at the Bank of England, believe it is clear that the introduction of AI machines and more advanced robotics could see a technological change and thus social and economic changes far larger than at any time in human history with massive unemployment of unprecedented scales.

Conversely, some researchers indicate the advent of intelligent machines could herald new prosperity for all. For example, in the book The Second Machine Age the authors, MIT's Erik Brynjolfsson and Andrew McAfee (2016), offer hope in a machine economy. The book authors write: *"The transformations brought about by digital technology will be profoundly beneficial ones. **We're heading into an era that won't just be different; it will be better.**"*

Furthermore, the new insights that machine intelligence will offer society could bring a change of paradigms as radical as the Capitalist Revolution and seek to eradicate inequality. Indeed the Standing Committee and seventeen-member Study Panel of the *One Hundred Year Study of Artificial Intelligence* (Stone et al., 2016) stated: *"AI may be thought of as a radically different mechanism for wealth creation in which everyone should be entitled to a portion of the world's AI-produced treasures."*

AI developers have made major advances in recent years and, although still limited to "weak" or "narrow" artificial intelligence, more advanced AI should be available within a decade that could have a significant impact on displacing human workers from current jobs. The social and economic consequences of which could be severe for millions of people. In this case,

according to a report to the US President of the United States (Furman et al., 2016), *"Aggressive policy action will be needed to help (those) who are disadvantaged by these changes and to ensure that the enormous benefits of AI and automation are developed by and available to all."*

These sentiments were also previously stated in a National Academy of Sciences paper (Cyert &amp; Mowery, 1987) which indicated: *"Technological change will make its maximum contribution to higher living standards, wages, and employment levels **if appropriate public and private policies are adopted to support the adjustment to new technologies.**"*

The challenge for policymakers will be to update, strengthen, and adapt policies to respond to the social and economic effects of AI.

This research project will focus on the following key research goals to ensure the development and the outcomes of AI and Artificial General Intelligence (AGI) are aligned with the social and economic advancement of all humanity, and how best to close those social and economic gaps through beneficial AI and AGI development.

## Key research goals:

- Develop and champion methodology *"for wealth creation in which everyone should be entitled to a portion of the world's AI-produced treasures"* (Stone et al., 2016).
- Identify a rigorous risk/benefit analysis methodology to help understand the social and economic impact of AI and AGI on employment.
- Analyze, understand, and develop research policies to provide recommendations on safety nets in the event of massive unemployment.
- Build a dataset or repository for monitoring advances in AI and AGI and their social and economic impact. Make the dataset available via open source for transparent sharing by the AI community.

## Sub goals:

- How do we mitigate the uncertainty and likelihood of massive unemployment?
- What impact have AI systems and robots had in industrial factories? Have companies that employed robots, increased or decreased human employment?
- What new skills have been required as robots enter the workplace?
- Which new laws or modifications to laws will need to be implemented to mitigate risk and monitoring of AI and AGI?
- Monitor and provide reporting on emerging technology policy, with a focus on artificial intelligence and automation.
- Provide research input into FLI's Asilomar long-term issues (Asilomar AI Principles, 2017) with particular focus on: *"23) Common Good: Superintelligence should only be developed in the service of widely shared ethical ideals, and for the benefit of all humanity rather than one state or organization."*

## References:

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