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DESIGN OF A STRATEGY BASED ON AI TO BOOST INTERSTELLAR TRAVEL: THE CASE OF BREAKTHROUGH STARSHOT PROJECT

Abstract

This paper intends to examine potential uses of Artificial Intelligence in the construction of an effective strategy to achieve interstellar travel within the next 20 years. We are currently in the first steps to incorporate AI in technological and scientific processes, this is how Deep Learning is being used to find exoplanets or to program robots for missions in other worlds. The potential of the IA goes much further, what is really surprising is the capacity that this technology would have in the resolution of complex problems.

In the present work, we develop a case study on how the Breakthrough Starshot (BS) project could implement the AI in all possible areas to increase the speed of its development. To carry out the research, interviews were conducted with different stakeholders of the project, where they were confronted with different scenarios where AI can have a high impact. With the information acquired, critical areas that require greater investment and care for the implementation of AI within the BS project are identified.

Finally, a roadmap with different milestones and task breakdown is developed in order to achieve the development objectives of AI within the project, in addition, strategic recommendations are made to the board of the BS project in order to boost the AI utilization in its future decision-making processes.