

IAF SPACE EDUCATION AND OUTREACH SYMPOSIUM (E1)  
In Orbit - Postgraduate Space Education (4)

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## ACCELERATING SPACE AND AI RESEARCH WITH THE FRONTIER DEVELOPMENT LAB

**Abstract**

This paper introduces the work of the Frontier Development Lab - an AI and space research accelerator that gives PhD and post-doctoral researchers the opportunity to spend eight weeks immersed in an interdisciplinary environment, working to develop new tools to help humanity.

In partnership with NASA in the US, and with ESA in Europe, the Frontier Development Lab (FDL) brings together experts from national/international agencies industry, academia and humanitarian organisations, to identify pertinent global challenges that could be tackled using the combination of space and AI.

Participants apply to take part in an eight-week research sprint, where they work in small interdisciplinary teams, with great results. Since its inception four years ago, FDL has developed an impressive success rate for research output over accelerated time periods, with research papers regularly accepted to respected journals, presented at scientific conferences (in both AI and space science domains) and featured in the media.

This paper will discuss the founding of Frontier Development Lab, the benefits for participants, and will showcase the results of this year's research sprints (taking place at The SETI Institute and the University of Oxford in June-August), as well as discussing the learnings from the programme, including identification of some of the main barriers to deployment of AI.