**CHAI Research Collaboration - Statement of motivation**

My research focuses on cooperation and competition in multi-agent systems, the dynamics of gradient-based learning in general-sum $n$-player games (including impossibility results) and the search for diverse/robust/difficult solutions in single- and multi-loss optimization. While currently working on a number of open questions along these lines, I am also very keen to broaden the scope of this research and lean into other interests in collaboration with others.

My experience as a freelance researcher has equipped me with a capacity to discover and dig into promising avenues of research independently, while also reaching out for collaboration to learn from experts, cover blind spots, and feed off each other's strengths. I have published a number of papers at top conferences (ICLR / NIPS / JMLR) including one as single author and three as first author with collaborators from DeepMind, Oxford, BAIR, FAIR, UCL, Google Brain and the Vector Institute.

I first heard of CHAI through Andrew Critch's paper on Löb's Theorem and Robust Cooperation – which blew my mind away as an undergraduate! I later worked with Jakob Foerster in Oxford, a CHAI research affiliate, who recommended the institute as an outstanding place for original research. I feel particularly aligned with CHAI's mission to develop systems that are provably beneficial for human beings, while understanding that our values are not only ill-defined but often multi-valued – and in constant interaction with other agents who have their own evolving goals. It would be a priviledge to partake in this mission.

**Alistair Letcher**