#StopCambridge KillerRobots

Dear Vice-Chancellor, Professor Stephen Toope,

We, the undersigned, are writing to express deep concern over the role of the University in furthering the development of lethal autonomous weapons (LAWs).

Our concern stems from the findings of a student investigation into the University's research activities, conducted in conjunction with the Stop Killer Robots campaign. This investigation found the University to be contributing to the development of LAWs through military-funded research collaborations, close relationships with commercial LAWs developers, and through the encouragement of student recruitment to LAWs developers. Findings of particular concern include:

- **Substantial research grants accepted by the University from companies developing LAWs technologies.** Alongside large grants from major defence companies such as Qinetiq and BAE Systems, these include smaller specialist companies such as the University spin-out Silicon Microgravity, from whom the University received £567,000 in research funding between 2015 and 2019. Silicon Microgravity are known to have developed LAWs-relevant 'tactical and navigation grade sensing' for the Ministry of Defence.
- **The encouragement of student recruitment to LAWs developers through the Computer Science Department's 'Supporters' Club'.** Club members, who pay a fee to gain access to recruitment channels, include Rebellion Defence and Xilinx. Rebellion Defence provides 'mission focussed' AI to the UK, US and allied militaries. Xilinx are known to have worked with Turkish drone manufacturer Baykar Makina, who have supplied drones deployed in Armenia, Syria and Libya.
- **An entire lab receiving major funding from the US Army, developing the ability for autonomous agents to cooperate (swarm).** The Prorok lab, based in the Department of Computer Science, has received further funding from the UK government, Nokia Bell Labs and Arm (known to be developing LAWs). Past research outputs have been funded by the likes of Terraswarm and United Technologies (now Raytheon). The Lab lists undergraduates among its current and past research contributors.
- **Multiple ongoing projects developing LAWs technologies, partnered with the defence industry and its collaborators.** Projects based in the Centre for Photonic Systems are developing sensor technologies in collaboration with companies including Tethered Drone Systems, Arm and Arqit, The Whittle Laboratory is currently collaborating on an electric aerospace project with Blue Bear Systems Research, a leading unmanned and defensive aerial systems company. Blue Bear Systems has had previous engagement with students through a PhD workshop, and a company site visit.

The decision to take life cannot be delegated to algorithms. Such a decision lacks the intention, understanding and moral reasoning necessary to evaluate the proportionality of an attack, where human life is reduced to merely a factor within a predetermined computation. A machine is incapable of exercising discretion, and lacks the compassion and empathy needed to make morally complex decisions. It follows that LAWs are incompatible with international human rights law, namely, the Right to Life ('no one shall be arbitrarily deprived of life'), the Right to a Remedy and Reparation, and the principle of human dignity.

With the advancement of LAWs capabilities comes the increasing potential for mass atrocities, and a lack of a clear line of accountability for unlawful civilian deaths. When neither the operator nor the programmer can fairly be held responsible for mistakes, justice for victims will be held out of reach. History tells us the use of autonomous weapons will likely expand into public life, outside of armed conflict. Autonomous weapons could be used for border control, policing; upholding oppressive structures and regimes.

Lethal autonomous weapons are liable to be coded with biases, where people of colour, women and non-binary people are at greater risk of misidentification and unlawful killing. Identifying combatants is complex, and leaving this decision to profiling algorithms risks the targeting of innocent civilians who merely share characteristics of the target profile. This leaves certain civilian groups at greater risk of attack- most often men of colour, of 'military age'. Both manners of mistakes compound structural biases.

The UN Secretary General has described the use of autonomous systems to take human life as "morally repugnant". The ongoing activities within Cambridge amount to the active endorsement of lethal autonomous weapons systems by the University, demonstrating a complete disregard for human rights and dignity. We demand that the University no longer participates in the autonomous arms race that entrenches colonial geopolitical imbalances, and threatens human life.

We urge the University to take substantial action to prevent the further advancement of lethal autonomous weaponry capabilities. We therefore call upon the University to:

1. **Cease all activities directly contributing to the development of lethal autonomous weapons.** The University must release a statement acknowledging the harms it has enabled through its research activities into LAWs technologies, committing to no further activities contributing to the development of LAWs. This must be established in formal policy.

2. **Cease the encouragement of student recruitment to LAWs developers.** The University must not allow LAWs developers access to students for the purposes of recruitment, nor must it allow student engagement with LAWs developers through workshops, talks or research projects.

3. **Take proactive measures to ensure researchers and students are made aware of all possible applications of their research.** The University must set out concrete plans to improve awareness around the potentially harmful uses of its members' research.

4. **Take proactive measures to safeguard against the unethical usage of its members' research output.** Safeguarding should be achieved by severing all ties with LAWs developers.

5. **Publicly endorse a ban on lethal autonomous weapons by signing the Future of Life Pledge.** Found here: Open Letter on Autonomous Weapons - Future of Life Institute

The UK is among a small minority of countries currently obstructing the adoption of an international ban on LAWs at the UN Convention on Certain Conventional Weapons (CCW). Now is a timely moment for UK institutions to show support for this ban and urge our government to do better. We demand the University accepts responsibility for the role it has played in the development of LAWs, and instead uses its influence to uphold human rights and dignity through socially responsible research.

Societies and J/MCRs

1. Cambridge Tech and Society
2. Extinction Rebellion Cambridge Universities
3. Cambridge University China Forum
4. St Catharine's College JCR
5. Cambridge Group for Ethics in Engineering and Computer Science

Students, Staff and Alumni

1. Eleanor Taylor, History and Politics Undergraduate, St Catharine's College, Matriculation 2019
2. Alice Horrell, HSPS undergraduate, St Catharine's college, Matriculation 2019
3. Emily Morley, HSPS undergraduate, Robinson College, Matriculation 2019
4. Francois Vibert Chang, Philosophy/PBS undergraduate, Pembroke College, Matriculation 2019
5. Kezhe Julian Temir, History Undergraduate, St Catharine's College, Matriculation 2019
6. Rachel Forsyth, English undergraduate, Pembroke College, Matriculation 2019
7. Eliza Griffiths, Stop Killer Robots, Queens' alumni
8. Catherine Irvine, HSPS Undergraduate, Newnham College, Matriculation 2019
9. Tanya Coppack, Engineering Undergraduate, St Catharine's College, Matriculation 2019
10. Joseph Cheng, Computer Science Undergraduate, St Catharine's College, Matriculation 2019
11. Cian Jones, St. Catharine's College, Matriculation 2019
12. Sam Ross, St Catherine's College, Engineering, 2019
13. Alice Le Coustumer, History and Politics Undergraduate, Murray Edwards College, Matriculation 2019
14. Nathaniel Cooke, King's College, 2017
15. Jacob Arbeid, HML, Trinity Hall, 2017
16. Dan Twine, Natural Sciences UG, St Catharine's College, 2019
17. Alice Tort, History and Politics undergraduate, Newnham College
18. Harvey Brown, English undergraduate, Jesus College, 2020