Toward a Moral Compass Model: Ethics and Automation

Research Objective

The purpose of this project is to better understand the current course of technological advancements and their often forgotten ethical and societal impacts. We will focus on drones but also provide a framework to think about a moral compass for autonomous ground and aerial vehicles and for AI's uses of big data. Our goal is to provide a moral compass model for these increasingly prevalent technologies. We hope to influence the Federal Aviation Administration's drone regulations and laws regarding our other areas of interest.

Research Approach

1. This research takes an interdisciplinary approach by drawing upon multiple fields and has grounding in Ethnic Studies. Applying a power-reflexivity lens, we are guided by the following questions:

   A. Whose ethics/moral values are reflected in the research question and in the design of an autonomous system?

   B. Who benefits from and who pays for these technological advancements and their unintended negative impacts?

   C. What technological advancements can be harnessed to decrease the existing inequities or at least not amplify them?

   D. What strategies or tactics can be used to empower people to better control our lives, lessen social inequities, and reconnect our values to our being and doing in the world?

2. We will conduct a *literature review* of philosophical, religious and legal works on ethics and automation. This includes topics such as: consumerism and drones, legal regulations on culpability and harm liability, biased data, reliance and trust in big data, and resistance to mass surveillance.

3. We plan to do collaborative work with other research teams (e.g. surveys pertaining to privacy concerns and trust in automation)

4. Methods include: thorough literature review to construct a moral compass model for IA systems, surveys on trust and privacy concerns of consumers, designers, and the larger public.

Research Team

- ARCS Fellow Malik Campbell, BA Candidate in Biology
- ARCS Fellow Alyssa Kim, BS Candidate in Mechanical Engineering
- ARCS Co-Investigator Gina Masequesmay, PhD in Sociology
- ARCS Volunteers: Laura Yesayan, Zack Counter, Aliza Orjalo
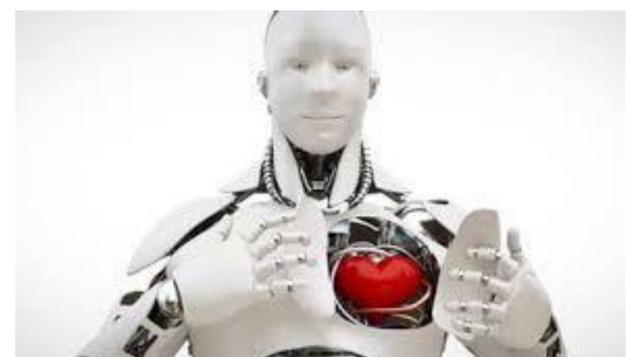
MORAL COMPASS
A survey of 2.3 million people worldwide reveals variations in the moral principles that guide drivers' decisions. Respondents were presented with 13 scenarios, in which a collision that killed some combination of passengers and pedestrians was unavoidable, and asked to decide who they would spare. Scientists used these data to group countries and territories into three groups based on their moral attitudes.

Preference for inaction / Sparing pedestrians / Sparing females / Sparing the fit / Sparing the lawful / Sparing higher status / Sparing the young / Sparing more / Sparing humans

▪ Western ▪ Eastern ▪ Southern

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