Contents

1   Reliance and trust in computers

Computers in

- health services

- training and assessment

- control of engines and machinery

- operational and financial scenarios

- genetics

In all of these cases computer is making decisions and we humans trust it to make the right one.

1.1   Expectations of autonomous systems

"So, rather than verifying the agent never choses a course of action it **believes will lead to a bad situation**, we would like to verify the agent never chooses a course of action that **it believes is more likely to reach a bad situation** than its other options"

2   Why professional ethics

In everyday practices we face issues and make decisions. We may be dealing with ethical issues but:

- We might not recognise them

- We may automatically do the easy thing

- We may do things we subsequently regret

- We may get ourselves and our employer into trouble

- We may miss opportunities.

3   Ethics and morality

Ethics is a set of **morally permissible** standards of a group that each member of the group, at his/her rational best, wants every other member to follow, even if their doing so would mean that he/she MUST do the same.

Morality is the set of standards that everyone (every rational person at his/her rational best) wants everyone else to follow, even if their following them means having to do the same.

3.1   Rational best in ethics reasoning

- Rational best:
    - Refers to the mental state of the person who wants the (ethical/moral) rules to be followed.
    - The person is assumed to be a rational persona whose capacity for reasoning is not diminished through some form of injury, disease, dugs, grief, fear, etc.

- Practical reasoning
    - Used to make decisions.
    - Often starts with the *code of conduct* and then takes into account mitigating circumstances.
    - There is not a set of common axioms/premises and the inference may be disputable.

3.2 Ethics vs morality

Ethical rules are not always moral rules. They can be morally **neutral**.

- If an IT professional delays installing a security patch and a person loses data, moral rules may not have much to say.

Breaking ethical rules may not mean breaking moral rules

- Publishing salaries of doctors in the USA may be unethical but not immoral

Ethics refer to rules provided by an external source, e.g., codes of conduct in workplaces or principles in religions.
Morals refer to an individuals own principles regarding right and wrong.

4 Properties of moral theories

Moral theory defines morality. Our definition of morality may not be acceptable to everybody. Morality answers to questions: **How do I know that X is good. Why is X good**

4.1 Virtue theory

Virtue ethics are normative ethical theories which emphasize *virtues* of mind and character. Virtue ethicists discuss the nature and definition of virtues and other related problems.

4.2 Focusing on the actions and implications

- **Consequentialism:** Consequences of an action, not the motivation behind the action, makes the action good or bad.

- **Utilitarianism:** Right decision is the one that causes the most happiness*.

    - Act utilitarianism: Determine whether or not the action taken maximizes happiness, compared to the other options
    - Rule utilitarianism: Determine whether or not the action taken complies with the set rules

- **Deontological** ethical theory: Some rules must be followed, even if they result in a bad end.

    - **Kant**: The only good is good will.
    - Unlike consequentialism, which judges actions by their results, deontology doesnt require weighing the costs and benefits of a situation. This avoids subjectivity and uncertainty because you only have to follow set rules.

- **Kantian ethics** based on the view that the only intrinsically good thing is a good will; an action can only be good if its maxim the principle behind it is duty to the moral law

    - Kant's formulation of humanity, the second section of the Categorical Imperative, states that as an end in itself humans are required never to treat others merely as a means to an end, but always, additionally, as ends in themselves

5 Properties of ethics theories

All social contract theories of ethics must be fair. We are in search of ethical theorises that have two key qualities:
Impartiality Every person is treated equally and no one is given preferential treatment in the theory.
Universality A decision based on the theory should be correct for everyone that has a similar decision to make.

Reference section

code of conduct
> The code of conduct for a group or organization is an agreement on rules of behaviour for the members of that group or organization.

virtues
> Behaviour showing high moral standards. Good moral quality in a person, or the general quality of being morally good: