Applied and Anticipatory Ethics: Research in Engineering and Information Computer Technology Ethics

Description

This project presents the work of the project lead, his co-author, and his students with the explicit goal of performing an exploratory analysis that involves applying ethical principles, codes of ethics, and at times legal distinctions to several case studies. The work presented here is meant to be studied, critiqued, and developed into further research.

Abstract

The OEC Project Pages are intended to cultivate a community of practice and allow ethics researchers, educators, and practitioners to more effectively disseminate their work. This Project Page provides a detailed overview and relevant resources for an on-going science or engineering ethics project. Once you've explored this project, visit the "Projects" section under "Resources" to see more ethics projects.

Description

There are 3 levels of work that will be on display in this project.

- My own work,
- The work of my co-author Michael Nestor and myself, and
- The work of our students.

All of these levels of work represent original research with the explicit goal of performing an exploratory analysis that involves applying ethical principles, codes of ethics, and at times legal distinctions to the subject matter under discussion. The subject matter includes general topics (e.g. aviation ethics), case studies (e.g. ethical issues with Flight MH370), and the study of specific artifacts (e.g. ethical issues related to iPhones).

Four fundamental methods are involved in all of this work:

- Stakeholder-Focused Ethical Analysis
- Post-Phenomenological Artifact-Based Analysis
- Technology-Based Analysis
- Anticipatory Ethical Analysis.

The student work shared here employs a stakeholder-focused ethical analysis. In this type of analysis, technical and ethical issues are identified and ethical principles and codes of ethics are applied from each stakeholder perspective

The goal of this project is to provide a foundation at three levels:

1. The topics and cases discussed are an introduction to these subjects for anyone who wants to learn about them,
2. Once this material is examined, it can be studied and critiqued, and
3. It should also be used to stimulate discussion and further research.

Much of this research is aimed at making explicit the application of ethical theories to a wide variety of cases, subjects, and topics as reference materials and as the basis for developing deeper analysis.

Leadership

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Contributor

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Recipient Organizations

Organizations and universities (including student affiliations) who will develop and use the materials presented here:

- Towson University (Towson, Maryland)

- Loyola University (Baltimore, Maryland)

- University of Baltimore (Baltimore, Maryland)

- Society for Ethics Across the Curriculum

- Association for Practical and Professional Ethics

- Interdisciplinary Coalition of North American Phenomenologists

Start and End Dates

The resources that will be made available on this project will be under continual development.

Contact Information

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Attached Resources

Wilson

1. [Case: GM Faulty Ignition Switches](#)
2. [Case: MedStar Ransomware Attack](#)

Wilson and Nestor

1. [CRISPR](#)
2. [CRISPR and Social Justice](#)

Student Work: Spring 2019

- *Engineering*
  1. [Ethics in 3D Printing - 1](#)
  2. [Ethics in 3D Printing - 2](#)
  3. [Ethics in 3D Printing - 3](#)
  4. [Ethics in Autonomous Vehicles - 1](#)
  5. [Ethics in Autonomous Vehicles - 2](#)
  6. [Ethics in Autonomous Vehicles - 3](#)
  7. [Drones](#)
  8. [Autonomous Weapons Systems](#)
  9. [Ethics in AI - 1](#)
  10. [Ethics in AI - 2](#)
  11. [Ethics in AI - 3](#)
  12. [Internet of Things - 1](#)

13. [Internet of Things - 2](#)
- *Engineering and Information Computer Technology (ICT)*
  1. [Social Media and Social Networking](#)
  2. [Ethics in Virtual Reality - 1](#)
  3. [Ethics in Virtual Reality - 2](#)
- *ICT and Medicine*
  1. [Ethical Analysis of CRISPR Technology](#)
  2. [CRISPR Experimentation on Humans](#)
  3. [VR/AR in Medicine](#)
- *ICT and Business*
  1. [AI in Advertising](#)
  2. [Intelligent Personal Assistants](#)
  3. [Blockchain](#)
  4. [AI and Job Loss](#)
  5. [Surveillance Capitalism](#)
  6. [Amazon and Facebook](#)
- *Cyber Warefare & Cyber Security*
  1. [Social Media, Regulation, and the Rise of Stochastic Terrorism](#)
  2. [Russian Interference in Elections](#)
  3. [Ethical Analysis: Facebook](#)

Student Work: Other

1. [Student Work: Wearable Technology](#)
2. [Student Work: Virtual Assistants](#)
3. [Student Work: AI Accounting](#)

Rights

Use of Materials on the OEC

Resource Type

Projects

Topics

Artificial Intelligence and Robotics
Big Data
Controversies

Ethics and Society
Human Enhancement

Discipline(s)

Engineering
Research Ethics
Teaching Ethics in STEM