

ACM Code of Ethics Case Study: Medical Implant Risk Analysis

(ACM, 2018) describes The Association of Computing Machinery (ACM) Code of Ethics and Professional Practice as a guide that helps computing professional make ethical decisions and prioritize the public good. (ACM, N.D) describes a case study on Corazón, a medical technology startup that implemented an open bug bounty program for their implantable heart health monitoring device app. This study highlighted the ACM Code of Ethics (ACM Code 2018 Task Force, 2018) that Corazón's aligned with, which includes:

- Principle 1.1: Contribution to society and human well-being by providing accessibility to their heart health monitoring devices.
- Principle 2.3: Adhering to medical device regulations by ensuring that their product is safe and efficient.
- Principle 2.5: Evaluated their systems for any impacts and risks by consulting with the researcher.
- Principle 2.6: Showed competence by using standard cryptographic algorithms instead of unproven proprietary techniques.
- Principle 2.9: Displayed dedication to designing a robust and secure systems by implementing an open bug bounty program to identify overlooked risks and vulnerabilities.
- Principle 3.7: Integrated their system into the society by collaborating with charities so as to provide their services to the less unfortunate people in the society.

Moreover, impacts on the legal, social issues and professionalism of the computing professionals involved include:

- Legal: Corazón's adherence to Principle 2.3 by ensuring that their product meets the medical device regulations and standards for safety and efficacy.
- Social: Corazón ensured that their services were accessible to all, the poor and the rich in the society.
- Corazon's computing professionals demonstrated professionalism by:
 - Following ethical principles in their product development, security practices, and risk analysis.
 - Their collaboration with independent researchers and promptly addressing potential vulnerabilities.
 - By prioritizing a thorough risk analysis and mitigating the identified risks and vulnerabilities swiftly.

ACM's comparison to British Computer Society (BCS) Code of Conduct include:

- Both serve as code of ethics to IT professionals and they work towards making IT for everyone e.g., promoting equal accessibility of IT benefits to everyone in the society (Trustee Board, 2022).
- BCS serves specifically in the UK and the members are forbidden to misrepresent the organization while ACM Code is global (Oz, 1992).

References

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