



ARTIFICIAL INTELLIGENCE IN THE MEDICAL FIELD AND ETHICS

BY

JOHN WILSON

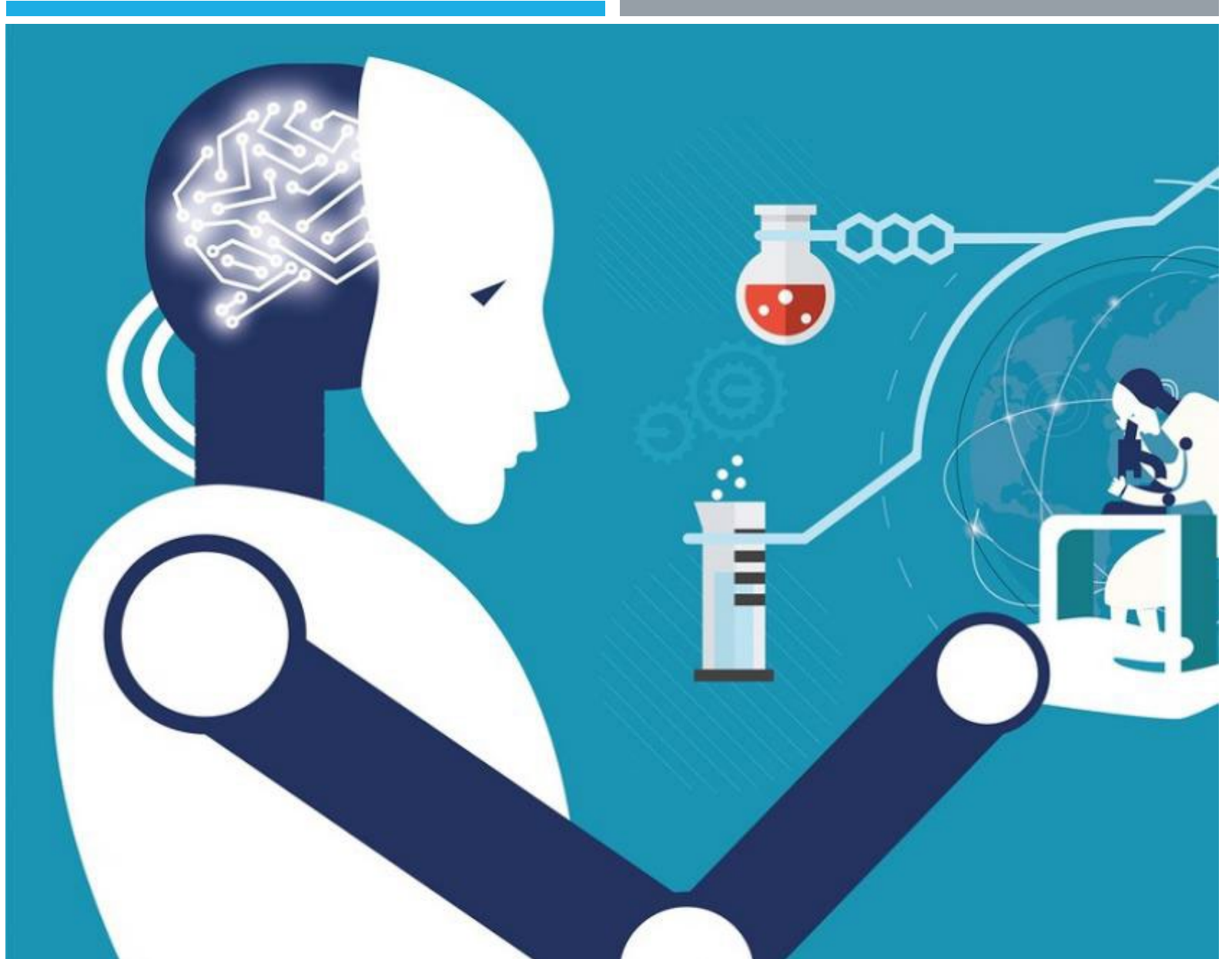
CS 300T

ODU

03 MAR 2021

THESIS STATEMENT

- UTILIZING ARTIFICIAL INTELLIGENCE (AI) SHOULD HAVE MANDATORY ETHICAL STANDARDS.



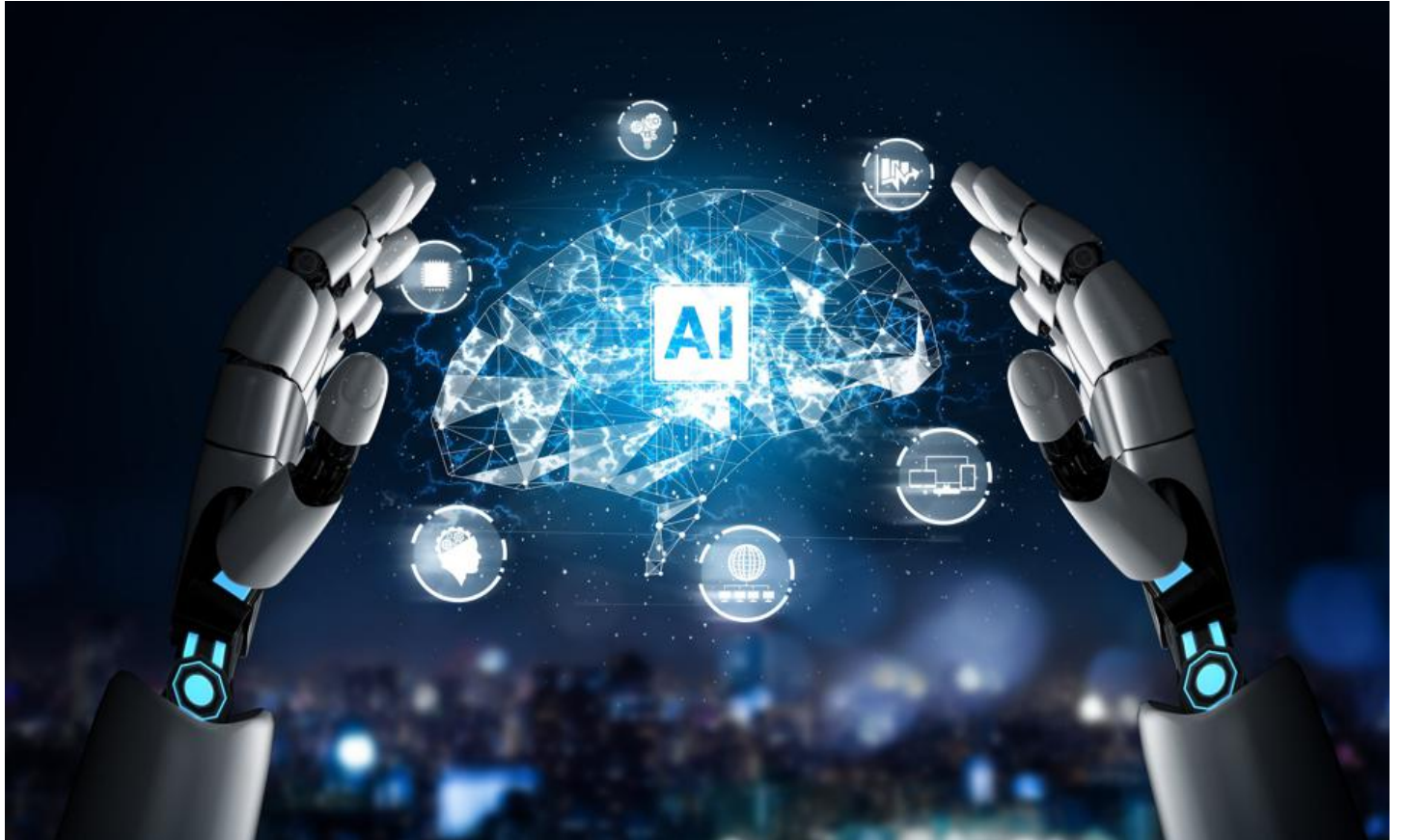


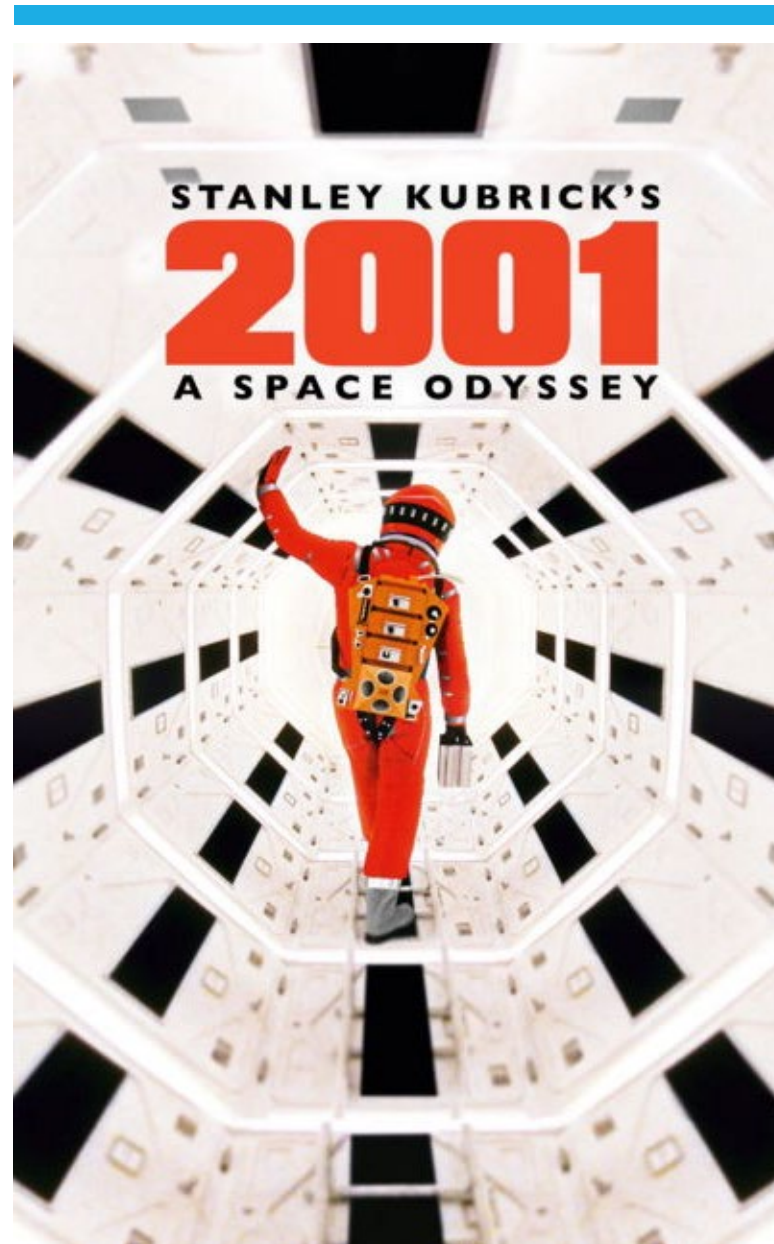
ETHICS

- Ethic Values Differ
- Ethics = Honesty, Truthfulness, Transparency, Benevolence, etc.
- Medical Ethics = Autonomy, Beneficence, Non-maleficence, and Justice

ARTIFICIAL INTELLIGENCE

- What is AI?
- What is AI in Medicine?





WHY DOES AI NEED ETHICS?

- Little to No Guidelines
- AI Not Like Humans.
- Need Control Over AI

WHAT ARE THE ETHICAL ISSUES?

- Patient Data
- Health Policies
- Algorithm Bias





CONCLUSION

- Why Need for Ethical Guidelines
- AI is the Future to Medicine
- Need to Protect Patients, Healthcare Providers, and AI Producers.

REFERENCE'S

- J. (2019, November 15). *Could Biases in Artificial Intelligence Databases Present Health Risks to Patients and Financial Risks to Healthcare Providers, including Medical Laboratories?* Dark Daily. <https://www.darkdaily.com/could-biases-in-artificial-intelligence-databases-present-health-risks-to-patients-and-financial-risks-to-healthcare-providers-including-medical-laboratories/>
- Rigby, M. J. (2019, February 1). *Ethical Dimensions of Using Artificial Intelligence in Health Care*. Journal of Ethics | American Medical Association. <https://journalofethics.ama-assn.org/article/ethical-dimensions-using-artificial-intelligence-health-care/2019-02>
- Hannon, P. (2018, March 14). *Researchers say use of artificial intelligence in medicine raises ethical questions*. News Center. <https://med.stanford.edu/news/all-news/2018/03/researchers-say-use-of-ai-in-medicine-raises-ethical-questions.html>
- Vermont Ethics Network. (2019, March 21). *Overview of Medical Ethics*. <https://vtethicsnetwork.org/medical-ethics/overview>
- Keskinbora, K. H. (2019). Medical ethics considerations on artificial intelligence. *Journal of Clinical Neuroscience*, 64, 277–282. <http://belmont.bme.umich.edu/wp-content/uploads/sites/377/2020/05/4.-Medical-ethics-considerations-on-artificial-intelligence-Keskinbora.pdf>



IMAGE REFERENCE'S

- Lenz, J. (2013, December). [Image of patient cart from the side]. <https://www.aarp.org/Health/Conditions-Treatments/Info-12-2013/Robotic-Surgery-Risks-Benefits.Html>. <https://www.aarp.org/health/conditions-treatments/info-12-2013/robotic-surgery-risks-benefits.html>
- Mustafabozdemir, M. (2018, May 31). [Illustration of a robot holding medical robot in its hand]. AI in Medicine Gets Closer to Making Regular Rounds. <https://governmentciomedia.com/ai-medicine-health-fda>
- [Handwriting ethic subject points]. (2019, August 26). Ethics in Life and Business. <https://www.scu.edu/mobi/resources--tools/blog-posts/ethics-in-life-and-business/ethics-in-life-and-business.html>
- [Photograph of the end side of multiple books]. (2020, September 24). The Best Disinfectant for Library Materials Is Time. <https://www.colorado.edu/libraries/2020/08/18/best-disinfectant-library-materials-time>
- Adobe Stock. (2020, August 3). [Illustration of robot hands holding an AI brain]. 3 Important Ways Artificial Intelligence Will Transform Your Business And Turbocharge Success. <https://www.forbes.com/sites/bernardmarr/2020/08/03/3-important-ways-artificial-intelligence-will-transform-your-business-and-turbocharge-success/?sh=2c3c9d61620f>
- Thinkstock. (2017, June 16). [Illustration of robot thinking]. How to Tell If AI or Machine Learning Is Real. <https://www.infoworld.com/article/3199295/primer-how-to-tell-if-ai-or-machine-learning-is-real.html>
- [Illustration of robot thinking about math]. (2019). Ethics of Public Use of AI and Big Data. <https://www.project-sherpa.eu/885-2/>
- [Blade Runner Movie Poster]. (1982). International Movie Database. <https://www.imdb.com/title/tt0083658/mediaviewer/rm3676975360/>
- [2001: Space Odyssey Movie Poster]. (1968). International Movie Database. https://www.imdb.com/title/tt0062622/?ref_=ttmi_tt