**3.1 Ethical Issues (red)**

ChatGPT lacks the capacity to diagnose complex medical conditions. Therefore, it should focus on administrative tasks and improving patient care.(DiGiorgio & Ehrenfeld, 2023) Artificial intelligence (AI) can be used to assist in disease prediction, diagnosis, and treatment. For example, AI can be used to develop cancer treatment guidelines from MRI radiomics. (Xue et al., 2023) ChatGPT is efficient in decreasing anxiety, but it is not a substitute for medical care. Regulators and healthcare professionals must establish standards and raise awareness. (Hopkins et al., 2023) ChatGPT has been evaluated for medical education and clinical decision-making, with encouraging outcomes. It can be utilized to assist students compose and audit material, yet it ought not be utilized to create unique substance. A observation framework ought to be presented to forestall understudies from utilizing ChatGPT for scholastic bad behavior, and approaches ought to be set up to direct the utilization of AI in human services. (Arif et al., 2023) ChatGPT is a promising instrument, yet it very well may be utilized for scholastic bad behavior. Educators ought to extend their measures to forestall understudies from utilizing ChatGPT on various decision tests. (Morreel et al., 2023) The authors suggest the requirement for an open science research foundation to standardize experimental techniques, readouts, and benchmarks to portray and quantify human-AI collaborations. (Kung et al., 2023) ChatGPT poses ethical concerns in the medical field. It must be appropriately trained and validated before being used. There is a risk that students and medical professionals may misinterpret medical knowledge. (Baumgartner, 2023) To safely integrate ChatGPT into otolaryngology, safeguards must be implemented. These include reviewing the literature, understanding capabilities, pilot testing, and protecting patient privacy. (Park et al., 2023) ChatGPT has a strong understanding of AI in surgery and robotics. It could be a valuable tool, but careful consideration of its use is important. AI could improve accuracy and efficiency, predictive analytics, training and education, and new treatments and technologies. (Hassan et al., 2023) AI-generated written content is virtually identical to text authored by human beings, thereby presenting a risk to the credibility of scientific literature and the safeguarding of intellectual property in the field of sports and exercise medicine. (Cox et al., n.d.) In the context of academic inquiry, the utilization of ChatGPT as a research tool may not invariably engender outcomes that are precise or impartial and could potentially contribute to a diminution in the exercise of discernment and innovation amongst researchers. (Marchandot et al., 2023) The prospective capacity of AI-generated recommendations to enhance clinical decision support alert reasoning is considerable. Notwithstanding, there are certain obstacles to surmount, such as the susceptibility of the ChatGPT framework and the requisite for supplementary informatics endeavors. (Liu et al., 2023) It is incumbent upon researchers to meticulously fact-check and authenticate their work, and for scientific journals to establish robust verification mechanisms to identify any potential interference by language models, to safeguard the credibility and validity of the research findings. (Dergaa et al., 2023)

**3.2 Trust Issues (yellow)**

ChatGPT enables algorithmic medicine, but concerns have been raised that it may supplant clinical judgment with procedural metrics. (DiGiorgio & Ehrenfeld, 2023) Real-time updating of training data is not feasible with ChatGPT, and the responses generated by the model may exhibit a tendency towards generality and vagueness, necessitating careful consideration of any possible adverse effects. (Xue et al., 2023) An article underscores the primacy of research quality vis-a-vis quantity, as demonstrated by a comparative study of abstracts generated by ChatGPT against the originals, which were evaluated via a plagiarism detection system and impartial human reviewers, in a double-blind fashion. (Moons & Van Bulck, 2023) A study observed a commensurate level of response quality from ChatGPT and Google's feature snippets, with respect to queries related to healthcare. (Hopkins et al., 2023) There is a pressing need to regulate LLMs and AI, while simultaneously embracing their potential to expedite research endeavors and mitigate inequitable outcomes. (Graf & Bernardi, 2023) Experts have raised concerns over the potential for ChatGPT to supplant critical thinking, generate superfluous and illogical information, and engender ethical, medicolegal, copyright, and methodological challenges. (Arif et al., 2023) A Dutch family medicine examination comprising 47 questions was utilized to evaluate ChatGPT's performance, yielding scores of 8/20 and 10/20 when prompted to provide singular responses and rank possible responses, respectively. (Morreel et al., 2023) Evaluation of ChatGPT using the United States Medical Licensing Examination evinced performance at or near the passing threshold, with explanations demonstrating a high degree of concordance and insight. (Kung et al., 2023) Ensuring the reliability and validity of information necessitates cross-checking with reputable and peer-reviewed sources. (Park et al., 2023) In an evaluation comprising 15 questions concerning AI in surgery encompassing aspects such as history, potential, limitations, and ethical concerns, ChatGPT demonstrated a nuanced and comprehensive understanding of the subject matter through its responses. (Hassan et al., 2023)A study revealed that AI has the capacity to expeditiously generate research papers, albeit with potential for inaccuracies and ethical implications. (Anderson et al., 2023)To preempt AI scraping articles, the authors advocate for ongoing human inspection by topic experts and publication of papers within "free paywalls." (Anderson et al., 2023)While ChatGPT-4 can offer prompt and secure medical recommendations for blepharoplasty, its training data may be obsolete, and it lacks the capacity to deliver tailored advice. (Cox et al., n.d.)In enhancing clinical decision support (CDS) alerts, both AI-generated and human-generated suggestions were deemed beneficial, according to a study. The AI-generated suggestions demonstrated a high degree of relevance and comprehensibility, with nine of the top 20 recommendations originating from the AI system. (Liu et al., 2023)ChatGPT's ability to incorporate false or partial information in academic papers can result in inadvertent plagiarism and incorrect attribution of ideas. (Dergaa et al., 2023)

**3.3 Accountability Issues (green)**

Concerns arise regarding the potential misuse of ChatGPT for producing fraudulent content in academic settings. Thus, guidelines must be implemented for proper usage. Additionally, ChatGPT has shown comparable performance to Google Feature Response, yet there are reservations regarding inadequate citations and inaccurate responses. (Moons & Van Bulck, 2023) ChatGPT and Google Feature Response gave similar results, but there are concerns about the lack of references and the possibility of incorrect responses. (Hopkins et al., 2023) The article explores methods to detect fraudulent manuscripts, such as data sharing, training, education, new technology, and blockchain. Blockchain can boost security and originality by creating an unalterable record, monitoring progress, handling intellectual property, storing data, and identifying plagiarism. (Ollivier et al., 2023) Researchers propose including ChatGPT as an author, but editors-in-chief reject this idea due to the lack of accountability and consent from the AI. (Graf & Bernardi, 2023) ChatGPT can assist with writing paper content using online search engines. However, its ability to perform a comprehensive literature search and critical analysis is limited, due to the constraints of its training data. As a result, its use is primarily limited to abstract writing. (Arif et al., 2023)Thorough evaluation, monitoring, and adherence to ethical guidelines are necessary to prevent harm to patients and protect intellectual property rights. (Park et al., 2023) AI-generated research papers raised plagiarism and ethical concerns due to potential inaccuracies and unreliability, as revealed by an experiment to generate papers instantly. (Anderson et al., 2023) LLMs may misattribute information, necessitating researchers to verify their work, establish fact-checking procedures, and design an NLP plagiarism checker to support editors and publishers in detecting problems. (Dergaa et al., 2023)