Q this is the link <https://link.springer.com/article/10.1007/s43681-023-00289-2>

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This article titled "Auditing large language models: a three-layered approach" published on SpringerLink discusses the ethical and social challenges associated with large language models (LLMs). Here are the key points:

1. The authors identify several risks associated with LLMs, including:
   * Discrimination: LLMs can perpetuate social stereotypes and biases.
   * Information hazards: LLMs may compromise privacy by leaking private information and inferring sensitive information.
   * Malicious use: LLMs can be used by users with bad intent, for example, to generate personalized scams or large-scale fraud.
   * Misinformation hazards: LLMs producing misleading information can lead to less well-informed users and erode trust in shared information.
   * Human-computer interaction harms: Users may overestimate the capabilities of LLMs that appear human-like and use them in unsafe ways.
   * Automation and environmental harms: Training and operating LLMs require lots of computing power, incurring high environmental costs.
2. The authors propose a three-layered approach to auditing LLMs, which includes governance audits, model audits, and application audits. Each of these audits focuses on different aspects of the LLMs and their applications.
3. Governance audits should focus on the adequacy of organizational governance structures and the risk management system. They should ensure that model development processes follow best practices.
4. Model audits should review training datasets and examine characteristics that are socially and ethically relevant, predictably transferable, and meaningfully operationalizable.
5. Application audits should assess the legality of the intended functions of products and services built using LLMs and their impact on users and societies.
6. The authors argue that auditing procedures must include elements of continuous ex-post monitoring to meet their regulatory objectives. They also emphasize the need for active collaboration between technology providers and independent auditors.
7. The authors discuss the potential institutional arrangements for conducting audits, which could include non-profit organizations, international organizations, private service providers, government agencies, and industry bodies.

Please note that this is a high-level summary and individual pages of the article can be loaded for more detailed analysis. If you want to delve deeper into specific sections, please let me know.