LSEP

The development must carefully navigate legal, ethical, social, and professional considerations to ensure it aligns with its mission of supporting SMEs in improving their cybersecurity resilience.

Legally, the system must comply with data protection regulations such as the GDPR, ensuring that any potentially identifying information (e.g. IP addresses) is pseudonymised or anonymised to protect SME and customer privacy. It must also adhere to the Computer Misuse Act, implementing strict access controls and audit mechanisms to prevent unauthorized use or data exposure.

Ethically, the assistant must be designed to minimize bias within the LLM, ensuring that its recommendations and interpretations are fair, explainable, and transparent. Given that many SMEs rely on limited expertise, the assistant should clearly communicate its reasoning and limitations to avoid over-reliance or misinterpretation of its outputs. Furthermore, safeguards must be in place to prevent the tool’s misuse for surveillance or employee monitoring, preserving user trust and ethical integrity.

Socially, the project must build trust and confidence among SME users by being transparent about its purpose. By helping non-experts understand technical alerts and incident impacts, the system allows SMEs to take ownership of their security and grow their cyber awareness within their businesses.

Professionally, the development process must reflect a strong duty of care, ensuring reliability, accuracy, and adherence to cybersecurity standards throughout the system’s lifecycle. Continuous professional development and validation against evolving threats are vital to maintain competence and uphold user trust.

By addressing these considerations, the project not only meets its legal and ethical obligations but also ensures that I can deliver an affordable, locally hosted, and transparent LLM-powered assistant that bridges the cybersecurity skills gap for SMEs. This will ultimately enable SMES to have faster, clearer, and more confident responses to cyber incidents while promoting long-term resilience and awareness.