

PS 6.10 Responsible Use of Artificial Intelligence in Engineering and Surveying

Artificial intelligence (AI) is a transformative tool for engineering and surveying practice, and NCEES affirms that its use must prioritize public safety, professional responsibility, and ethical standards. While AI-powered tools can automate complex tasks, human interaction and oversight remains essential to ensure proper use, accuracy, reliability, and adherence to industry standards. Engineers and surveyors must maintain competence in their practice, understanding both AI's capabilities and its limitations to make informed judgments.

Additionally, ethical considerations, including data privacy, bias mitigation, and accountability, should be prioritized to uphold public trust and professional integrity.

A. Responsible Charge

1. Licensed professionals retain ultimate responsibility for decisions and thus must ensure AI-generated outputs align with public protection, professional standards, and regulatory requirements.
2. Licensed professionals must not use AI to practice outside of their professional competency.
3. AI is a tool to assist, not replace, professional judgment, with licensed professionals overseeing and validating all critical processes.

B. Competence

1. Licensed professionals should stay informed about AI advancements, understanding its use, capabilities, limitations, and appropriate applications in their field.
2. Continuing education and training are essential to ensure licensed professionals can effectively integrate AI while upholding industry best practices.

C. Validation/Transparency

1. Licensed professionals must critically assess AI outputs, performing independent checks to confirm accuracy and reliability before implementation.
2. AI-generated results should be verifiable, with clear documentation of methodologies, data sources, and assumptions used in decision-making.

D. Ethical Considerations

1. Licensed professionals must adhere to all legal and ethical standards in the use of AI applications and recognize that safeguarding data privacy and security is critical.
2. AI models should be monitored for biases, ensuring fair and impartial outcomes that do not compromise public trust or professional integrity.

E. Guidance and Collaboration

1. Member boards should develop specific guidelines or rules addressing the responsible use of AI in engineering and surveying to ensure compliance with professional standards and public safety.
2. NCEES, member boards, and professional societies, along with outside experts should collaborate to establish best practices for AI integration to ensure AI is used effectively and responsibly across the engineering and surveying professions.