

## LIMITATIONS OF ARTIFICIAL INTELLIGENCE IN FORENSIC SCIENCE

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The field of artificial intelligence in forensic science examines the prospects that exist today and in the future for integrating cutting-edge artificial intelligence (AI) technologies with traditional forensic and investigative procedures. But there are a number of restrictions attached to it. Let's take a quick look at the limitations of AI in toxicology and forensic medicine.

**Machine training:** For accurate interpretation, an AI machine needs a substantial data feed. For the machine to be able to learn from the data and be educated in several important areas of forensic medicine by forensic professionals, high-quality and quantity data is necessary so that the computer can interpret post-mortem examination results and provide a reliable opinion. Experts in forensic medicine must first manually annotate documents and photos with important discoveries, conclusions, and other information for computers. Forensic specialists must first put in a great deal of work to do this [1].

**Trust:** Experts in forensic medicine must establish confidence with their stakeholders and clients. They must demonstrate to the public the accuracy and reliability of their work. It will be quite concerning to see if the judges, the investigative body, and the general public will find the machine's opinion credible. The judiciary and the investigating agency are the clients of forensic experts, and they must be convinced by them that the conclusions drawn from AI are reliable and correct.

**Medicolegal perspectives:** Every piece of documented evidence must be presented orally by the expert witness in a court of law. Hence, the most crucial question in the realm of forensic medicine is whether the opinion generated by AI will be admitted as evidence in a court of law.

**Infrastructure:** To use AI, forensic medical professionals require the appropriate infrastructure and tools. Large data storage systems and high-performance computer infrastructure are examples of this. Every procedure will be quite expensive. Another major worry is whether less developed countries will be able to fund such arrangements.

**Interoperability:** It's possible that different AI tools can't communicate with one another. There may be instances where this results in the creation of data silos. There will be effort duplication as a result [2].

**Ethical considerations:** Artificial Intelligence is a potent tool that may increase precision and productivity. On the other hand, its application calls into question current regulatory frameworks and poses ethical issues. There are many who contend that the application of AI will hinder the custom of human judgment.

**Lack of facilities:** A significant portion of the populace lacks access to contemporary healthcare facilities. Therefore, legislators will have a very tough time creating high-tech infrastructure in the field of forensic medicine.

**Human involvement:** AI is merely an automated instrument. It cannot take the place of knowledge and human contact. Every piece of data that is input into the computer will need human labor. Therefore, forensic professionals will need to invest a great deal of time and effort in training the computer at first, and ongoing data updates are also required [3].

### REFERENCES

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