# **Evidence Analysis and Interpretation**

Consider how AI can enhance investigative processes, ensure evidential sufficiency, and improve the interpretation of forensic findings. Case examples may include analysis and interpretation of footwear, tires, bloodstain patterns, latent prints, odontology, firearms, and seized drugs, including origin determination, pattern classification and comparison, sample selection, suitability determinations, DNA mixture deconvolution, facial recognition, and method determination.

# Research

Examine how AI may enhance forensics research through methods development and validation studies. Case examples may include strategies for digesting large volumes of literature to inform systematic reviews or testimony, and conducting experimental studies.

# Training

Explore how AI can be used for immersive learning experiences. Case examples may include 3D/AR/VR, visualization, simulation, interactive mock court, real-time AI-driven coaching, proficiency testing, and developing training materials that reflect real casework.

## **Quality Management and Assurance**

Focus on how AI might impact the critical role of quality management to maintain accuracy, integrity, and reliability across forensic workflows. Case examples may include investigator blinding, assessment of crime scene equipment contamination, tracking communications with investigators, and monitoring testimony.

## Communication

Assess how AI can be used to strengthen internal and external communication. Case examples may include summarizing and distilling key points of lengthy meetings or legal proceedings, creating adaptive questionnaires for jury selection, generating simplified summaries of technical evidence for jurors or laypersons, improving comprehension and decision-making, preparing expert witnesses and legal teams by identifying relevant evidence, and simulating testimony scenarios and practice questions.

# Laboratory Operations and Case Management

Delve into AI opportunities to streamline and automate workflows and enhance efficiency in forensics laboratories. Case examples may include evidence triage, predictive case management, case review, chain of custody tracking, maintenance agreements, and allocation of staff or resources.