Camera Ready Summary

Conference Name

6th International Conference on Electrical Engineering and Information & Communication Technology 2024

Paper ID

554

Paper Title

Bloodstain Classification in Forensic Analysis Using Optimized 3D CNN

Abstract

Abstract—Blood stain detection is essential in crime scene analysis as it provides valuable insights into the events that transpired, aids in identifying individuals involved and supports the investigation process of criminal cases. It helps investigators understand what happened, who was involved and when it occurred. Advancements in forensic science, particularly bloodstain analysis, have become imperative for enhancing crime scene reconstruction. Conventional methods like DNA analysis,chemical analysis often takes more time to identify bloodstain. Instead of DNA analysis this research contributes to the advancement of forensic science by introducing an innovative approach to bloodstain identification and classification by using a 3D CNN model utilizing the capabilities of Hyperspectral Imaging. Here we introduce an optimized 3D CNN with mish activation function and finding the best accuracy. This work will help to make faster investigations of forensic scene analysis and analyzing criminal cases.

Index Terms—Blood Strain Classification, Optimized 3D-CNN, Forensic Science, Crime scene analysis, Hyperspectral Image, mish, principal component analysis (PC).

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Camera Ready Questions Response

1. Final IEEE PDF eXpress Compatible Paper:

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2. IEEE Copyright Transfer

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3. Registration

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4. Use of a Large Language Model (LLM) in the manuscript

Agreement accepted

5. Presentation Material

Agreement accepted

6. IEEE Xplore’s scope and quality requirements

Agreement accepted