MASTER FORENSIC SCIENCE – RESEARCH PROJECT

Title	: From bone to identity: An analysis on vertebrae shape in relation to age, gender and body.
Keywords	: Vertebrae, spine, bone, age, gender, identification, shape analysis
Forensic Expertise Area	: Forensic Medicine
Start Date	: asap/na
Host Institute	: Eurofins/Radboudumc
Department/Team	:
Supervisor	: Vidija Soerdjbalie-Maikoe
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UVA Coordinator	: Arian van Asten/Yorike Hartman

Short Description

This literature study explores to what extent identifiable personal characteristics—such as age, sex, bone density, height, BMI, and geographical or demographic origin—can be inferred from the anatomical shape and structural features of the vertebrae and spinal column. By examining how these factors influence vertebral morphology, the research aims to determine whether the spine can serve as a reliable source of biometric or anthropological information.

Key References

1) Sex estimation using the human vertebra: a systematic review | Egyptian Journal of Forensic Sciences | Full Text
2) Sex determination and age estimation method using the trabecular structure of the third cervical vertebral body by head and neck CT in Japanese adults - ScienceDirect
3) Age- and gender-related variations in morphometric characteristics of thoracic spine pedicle - Morales-Avalos - 2014 - Clinical Anatomy - Wiley Online Library
4) Sex Differences in the Spine | Current Physical Medicine and Rehabilitation Reports

Required/Recommended skills and expertise

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Visuals

