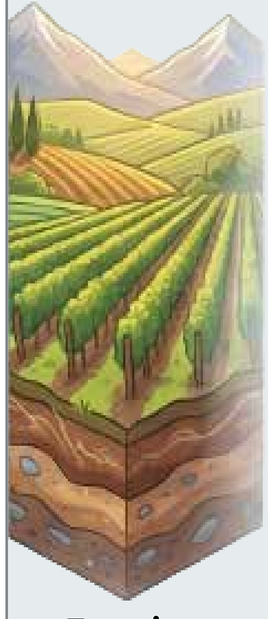
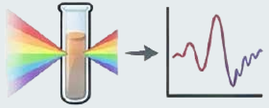
Machine Learning for Geographical Indications

Capturing the Territorial Signatura (Data Acquisition)



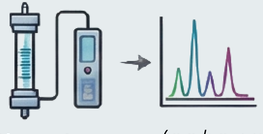
Terroir

WINE



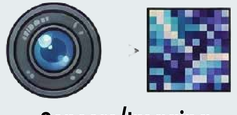
Spectroscopy (NIR/FTIR)

TEA



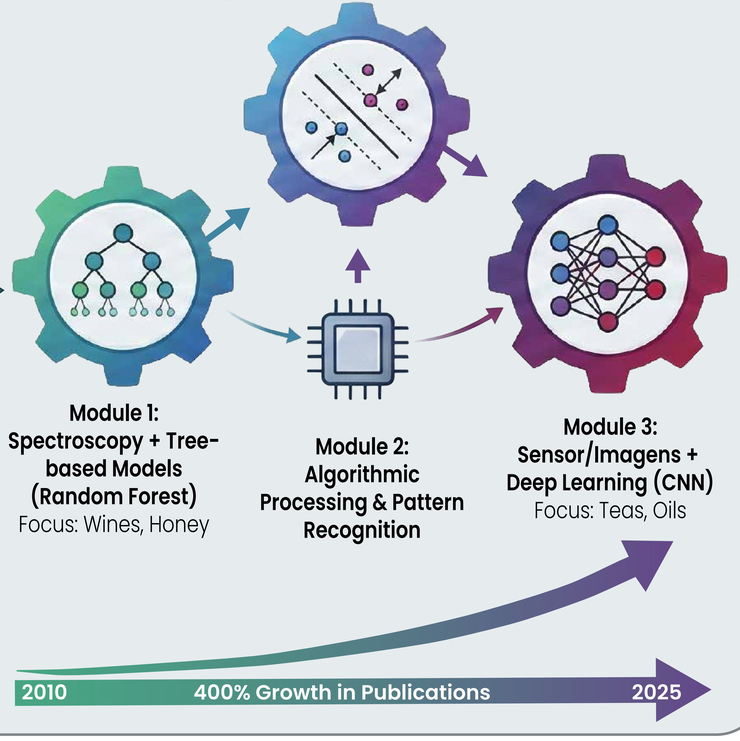
Chomatograpgy (GC/LC-MS)

MEAT



Sensors/Imaging (e-nose/Hyperspectral)

Machine Learning Evolution & Tecnological Modules (Processing)



Outcomes & Certification Challenges

Authentication & Fraud Detection (79% of studes)

Traceability & Blockchain Integration

Quality Predition

CRITICAL GAPS IDENTIFIED

Limited External Validation:
Only 23% tested on Independente geographical samples

Interpretability Challenge:
Need for explainable AI over "black-boxes" for regulatory trust.