Quiz: Conclusion

AI-Based Detection of Hedge Fund Fraud

Joerg Osterrieder

Zurich University of Applied Sciences (ZHAW)

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Question 1

Which methods offer the best balance of performance and interpretability?

a) Deep neural networks
b) Ensemble methods
c) Logistic regression
d) Graph neural networks

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Answer

b) Ensemble methods

Random forests and gradient boosting provide the best balance, achieving high AUC (0.85–0.92) while maintaining interpretability through feature importance scores and SHAP values.

Section 7: Conclusion

Question 2

What are the three audience groups for the takeaways?

a) Students, Teachers, Admins
b) Developers, Testers, Managers
c) Practitioners, Regulators, Researchers
d) Investors, Brokers, Auditors

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Answer

c) Practitioners, Regulators, Researchers

The conclusion provides targeted takeaways for: (1) Practitioners (fund managers, compliance officers), (2) Regulators (SEC, ESMA, FCA), and (3) Researchers (academics, data scientists).

Section 7: Takeaways by Audience

Question 3

What is the most critical enabler for field progress?

a) Benchmark datasets
b) Better algorithms
c) More funding
d) Regulatory reform

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Answer

a) Benchmark datasets

The conclusion emphasizes that creating shared, privacy-preserving benchmark datasets is the single most critical enabler. Without accessible data, researchers cannot compare methods or validate improvements.

Section 7: Key Takeaways

Question 4

What collaboration model is required for production deployment?

a) Government only
b) Industry only
c) Academic only
d) Academic + Regulatory + Industry

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Answer

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The conclusion stresses that production-grade fraud detection requires three-way collaboration: academics (methodology), regulators (data access, requirements), and industry (deployment, validation).

Section 7: Path Forward

Question 5

What paradigm shift is needed for adversarial fraud?

a) Batch to real-time processing
b) Supervised to adversarial learning
c) Cloud to edge computing
d) Rule-based to machine learning

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c) Cloud to edge computing
d) Rule-based to machine learning

Answer

b) Supervised to adversarial learning

The conclusion calls for a shift from static supervised learning to adversarial learning frameworks that can adapt to evolving fraud tactics, recognizing fraud detection as an arms race.

Section 7: Future Directions