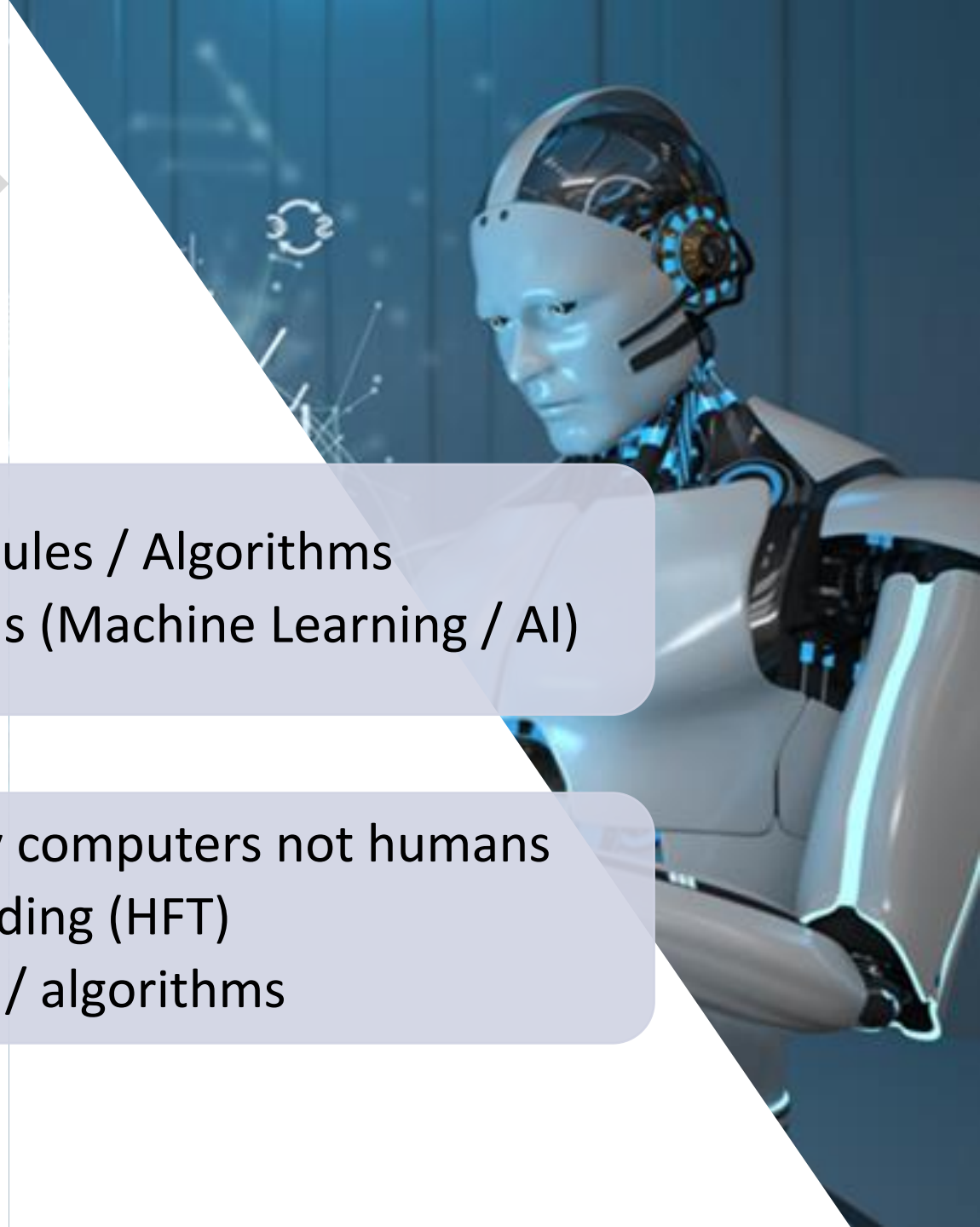
Algorithmic Trading A-Z

with Python and Machine Learning

What is Algorithmic Trading?

Two major aspects of Algo Trading



Clear Strategy / Plan

- Pre-programmed Rules / Algorithms
- Learning Algorithms (Machine Learning / AI)

Automated Trading

- Trades executed by computers not humans
- high-frequency Trading (HFT)
- complex strategies / algorithms

Applications and Use Cases

Transaction cost reduction (VWAP, TWAP, Implementation Shortfall)
→ Break down large orders into small orders to be placed over time.

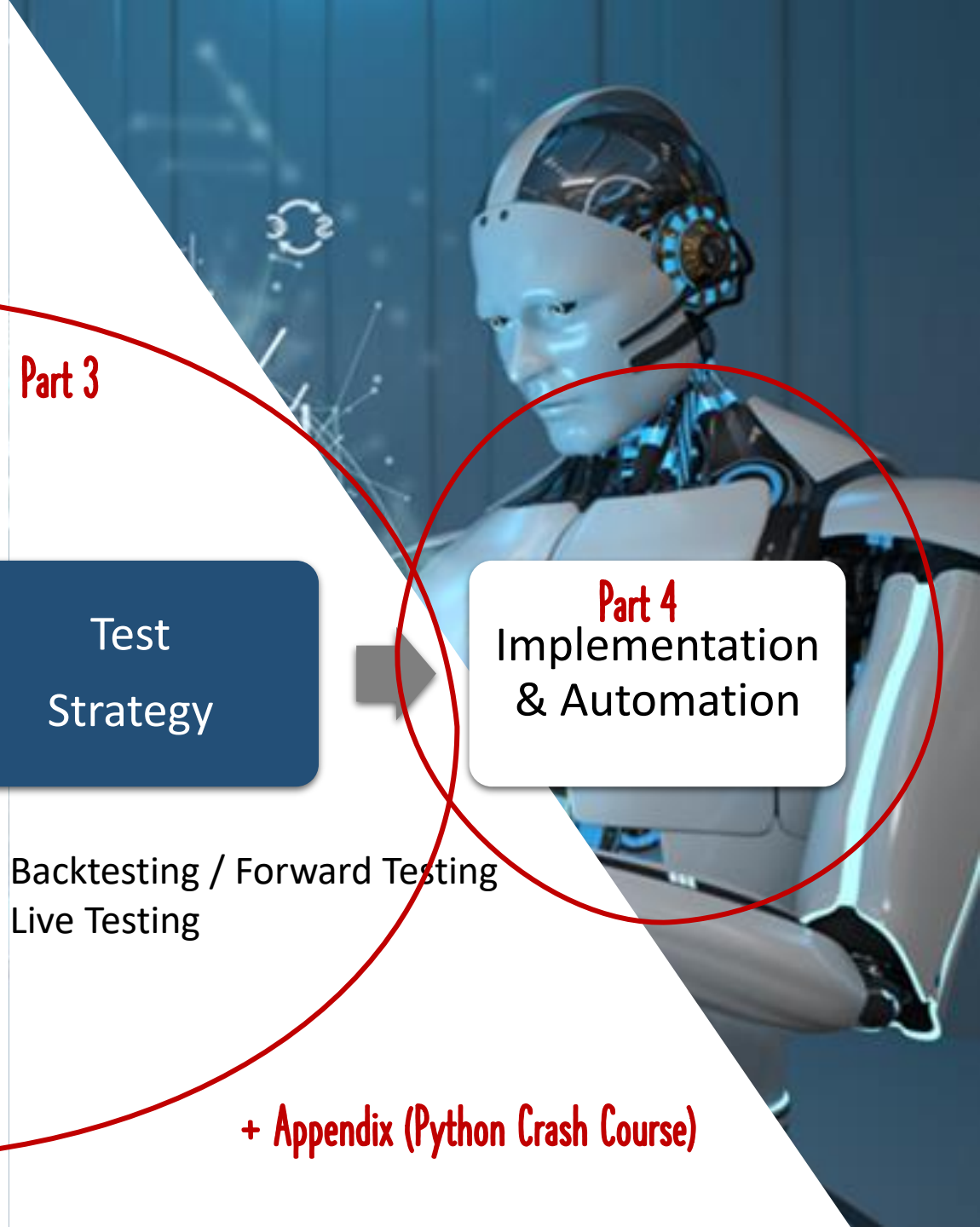
Portfolio Rebalancing
→ Rebalance portfolio constituents to target weights.

Robo Investing / Robo Advising
→ Asset Allocation, Portfolio Optimization, Portfolio Management and Rebalancing with minimal human intervention (for long-term Investments)

Market Timing ("alpha-generating strategies")

- Timing trades (long and short positions) to benefit from mispricing / market inefficiencies.
- Independent from general market trends (works in bull and bear markets).
- Technical Indicators (e.g. Moving Averages) and other Pattern Recognition Techniques (Machine Learning / AI) are used. → Algorithmic Day Trading

Course Overview



Part 3

Prerequisites

- Python — Part 2
- Day Trading — Part 1

Define Strategy

- Technical Indicators
- Machine Learning

Test Strategy

- Backtesting / Forward Testing
- Live Testing

Part 4
Implementation & Automation

+ Part 5 - Expert Tips and Tricks

+ Appendix (Python Crash Course)

Broker Account (OANDA / FXCM)

Prerequisites

- Python
- Day Trading

Define Strategy

- Technical Indicators
- Machine Learning

Test Strategy

- Backtesting / Forward Testing
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Implementation & Automation

In some Countries, CFD/FOREX Trading is prohibited / Brokers not available (Japan, Korea, Russia, Turkey).