Chương 7: CÁC CHƯƠNG TRÌNH MAPREDUCE

Chuyển file từ local lên hdfs

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* 1. Tạo mapreduce MonthlyCoinVolumeSummary - Tổng hợp Volume Giao Dịch Theo Coin và Tháng

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nano mapper.py

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nano reducer.py

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Trao quyền: chmod +x mapper.py reducer.py

Chạy mapreduce: hadoop jar /home/bigdata/hadoop/share/hadoop/tools/lib/hadoop-streaming-3.3.6.jar -input /crypto/data/binance/binance\_ohlcv\_1hour.csv -output /mapreduce/output\_binance\_1hour -mapper ~/mapreduce\_python/MonthlyCoinVolumeSummary/mapper.py -reducer ~/mapreduce\_python/MonthlyCoinVolumeSummary/reducer.py

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Xem kết quả: hdfs dfs -cat /mapreduce/output\_binance\_1hour/part-00000

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* 1. AvgCloseperDay- Tính Trung Bình Giá Đóng Cửa (Close) Theo Ngày

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nano mapper.py

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Trao quyền: chmod +x mapper.py reducer.py

Chạy mapreduce: hadoop jar /home/bigdata/hadoop/share/hadoop/tools/lib/hadoop-streaming-3.3.6.jar -input /crypto/data/binance/binance\_ohlcv\_1hour.csv -output /mapreduce/output\_binance\_1hour\_ AvgCloseperDay -mapper ~/mapreduce\_python/ AvgCloseperDay/mapper.py -reducer ~/mapreduce\_python/ AvgCloseperDay/reducer.py

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Xem kết quả: hdfs dfs -cat /mapreduce/output\_binance\_1hour\_AvgCloseperDay/part-00000

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Lưu kết quả: hdfs dfs -get /mapreduce/output\_binance\_1hour\_AvgCloseperDay/part-00000 ~/mapreduce\_python/AvgCloseperDay/result.txt

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* 1. WeeklyVolatilityDetection - Phát Hiện Độ Biến Động (Volatility) Theo Tuần

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nano reducer.py

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Trao quyền: chmod +x mapper.py reducer.py

Chạy mapreduce: hadoop jar /home/bigdata/hadoop/share/hadoop/tools/lib/hadoop-streaming-3.3.6.jar \

-input /crypto/data/binance/binance\_ohlcv\_1hour.csv \

-output /mapreduce/output\_binance\_1hour\_WeeklyVolatilityDetection \

-mapper ~/mapreduce\_python/WeeklyVolatilityDetection/mapper.py \

-reducer ~/mapreduce\_python/WeeklyVolatilityDetection/reducer.py

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Lưu kết quả: hdfs dfs -get /mapreduce/output\_binance\_1hour\_WeeklyVolatilityDetection/part-00000 ~/mapreduce\_python/WeeklyVolatilityDetection/result.txt

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* 1. HighVolumeSpikeCount - Đếm Số Lượng Giao Dịch Cao (High Volume Spikes)

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nano reducer.py

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Trao quyền: chmod +x mapper.py reducer.py

Chạy mapreduce: hadoop jar /home/bigdata/hadoop/share/hadoop/tools/lib/hadoop-streaming-3.3.6.jar \

-input /crypto/data/binance/binance\_ohlcv\_1hour.csv \

-output /mapreduce/output\_binance\_1hour\_ HighVolumeSpikeCount \

-mapper ~/mapreduce\_python/HighVolumeSpikeCount/mapper.py \

-reducer ~/mapreduce\_python/HighVolumeSpikeCount/reducer.py

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Lưu kết quả: hdfs dfs -get /mapreduce/output\_binance\_1hour\_HighVolumeSpikeCount/part-00000 ~/mapreduce\_python/HighVolumeSpikeCount/result.txt

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* 1. MonthlyAverageRSI - Tính Chỉ Số RSI Trung Bình Theo Tháng

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Nano reducer.py

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Trao quyền: chmod +x mapper.py reducer.py

Chạy: hadoop jar /home/bigdata/hadoop/share/hadoop/tools/lib/hadoop-streaming-3.3.6.jar \

-input /crypto/data/binance/binance\_ohlcv\_1hour.csv \

-output /mapreduce/output\_binance\_1hour\_MonthlyAverageRSI \

-mapper ~/mapreduce\_python/MonthlyAverageRSI/mapper.py \

-reducer ~/mapreduce\_python/MonthlyAverageRSI/reducer.py

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Lưu kết quả: hdfs dfs -get /mapreduce/output\_binance\_1hour\_MonthlyAverageRSI/part-00000 ~/mapreduce\_python/MonthlyAverageRSI/result.txt

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* 1. MACrossoverSignalClassification - Phân Loại Tín Hiệu Mua/Bán Dựa Trên MA Crossover

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Trao quyền: chmod +x mapper.py reducer.py

hadoop jar /home/bigdata/hadoop/share/hadoop/tools/lib/hadoop-streaming-3.3.6.jar \

-input /crypto/data/binance/binance\_ohlcv\_1hour.csv \

-output /mapreduce/output\_binance\_1hour\_MACrossoverSignalClassification \

-mapper ~/mapreduce\_python/MACrossoverSignalClassification/mapper.py \

-reducer ~/mapreduce\_python/MACrossoverSignalClassification/reducer.py

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Lưu kết quả: hdfs dfs -get /mapreduce/output\_binance\_1hour\_MACrossoverSignalClassification/part-00000 ~/mapreduce\_python/MACrossoverSignalClassification/result.txt

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* 1. MovingAverageForecast - Dự Đoán Đơn Giản Dựa Trên Trung Bình Di Động

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Trao quyền: chmod +x mapper.py reducer.py

hadoop jar /home/bigdata/hadoop/share/hadoop/tools/lib/hadoop-streaming-3.3.6.jar \

-input /crypto/data/binance/binance\_ohlcv\_1hour.csv \

-output /mapreduce/output\_binance\_1hour\_MovingAverageForecast \

-mapper ~/mapreduce\_python/MovingAverageForecast/mapper.py \

-reducer ~/mapreduce\_python/MovingAverageForecast/reducer.py

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Lưu kết quả: hdfs dfs -get /mapreduce/output\_binance\_1hour\_MovingAverageForecast/part-00000 ~/mapreduce\_python/MovingAverageForecast/result.txt

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* 1. Đếm số coin mỗi sàn

Mapper.py

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Reducer.py

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hadoop jar /home/bigdata/hadoop/share/hadoop/tools/lib/hadoop-streaming-3.3.6.jar \

-input /crypto/data/binance/binance\_ohlcv\_1hour.csv \

-output /mapreduce/output\_binance\_1hour\_map8 \

-mapper ~/mapreduce\_python/mapper.py \

-reducer ~/mapreduce\_python/reducer.py

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Kết quả

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