

■ MARKET ANALYSIS SYSTEM

Timeline Breakdown & Architecture Guide

■ System Overview

This comprehensive market intelligence platform combines real-time news monitoring with advanced sentiment analysis to provide actionable trading insights. The system operates continuously with multiple parallel processes, delivering both instant alerts and comprehensive market reports via Telegram notifications.

■ SENTIMENT ANALYSIS FREQUENCY

Component	Frequency	Scope	Method	Output
■ Comprehensive Analysis	Every 4 hours	Top 10-25 stocks	NewsAPI + Advanced scoring	BUY/SELL recommendation
■ Quick Assessment	Every 5 minutes	Breaking news only	Keyword matching	Instant alerts
■ Full Market Analysis	On-demand	All monitored stocks	NewsAPI + Full analysis	Complete reports
■ RSS Monitoring	Every 5 minutes	26+ stock symbols	RSS feed parsing	Real-time news alerts
■ Earnings Calendar	Every 4 hours	Top performers	yfinance + sentiment	Earnings with BUY/SELL

■ SYSTEM WORKFLOWS

1. Real-Time News Monitoring (Continuous)

RSS Feed Check (every 5 min) → Keyword Matching (26+ symbols) → Urgency Scoring (1-10 scale) → Quick Sentiment Analysis → BUY/SELL Assessment → Instant Telegram Alert

2. Comprehensive Market Analysis (Every 4 hours)

S&P; 500 Data Pull → Top Performers Analysis → Earnings Calendar Check → Advanced Sentiment Analysis → Trading Recommendations → Comprehensive Telegram Report with BUY/SELL indicators

3. Parallel System Operation

Thread 1: News Monitor (continuous 5-min cycles) Thread 2: Market Analysis (4-hour comprehensive cycles) Main Thread: System coordination, error handling & user interface

■ CORE SYSTEM COMPONENTS

Component	File	Primary Function	Update Frequency
News Monitor	flash_news_monitor.py	Real-time RSS monitoring & alerts	Every 5 minutes
Market Orchestrator	market_orchestrator.py	S&P 500 analysis & reports	Every 4 hours
Telegram Bot	telegram_bot.py	Enhanced message formatting	Real-time
Sentiment Analyzer	sentiment_analyzer.py	News sentiment & BUY/SELL logic	Per analysis
Unified System	unified_market_system.py	Parallel system coordination	Continuous
Config Loader	config_loader.py	Secure credential management	On startup

■ TRADING RECOMMENDATION SYSTEM

Signal	Criteria	Confidence	Emoji	Action
STRONG BUY	Score >1.5, Positive	>70%	■■	High conviction buy
BUY	Score >0.5, Positive	>70%	■	Moderate buy
WEAK BUY	Score >1.0, Positive	50-70%	■	Cautious buy
STRONG SELL	Score <-1.5, Negative	>70%	■■	High conviction sell
SELL	Score <-0.5, Negative	>70%	■	Moderate sell
WEAK SELL	Score <-1.0, Negative	50-70%	■	Cautious sell
HOLD	Mixed/Neutral	<50%	■	Monitor & hold

■ MONITORED ASSETS

The system monitors 26+ stock symbols across major sectors: • Tech Giants: AAPL, MSFT, GOOGL, AMZN, TSLA, META, NVDA • Financial: JPM, V, MA, UNH • Consumer: PG, HD, DIS, NFLX • Software: CRM, ADBE, PYPL, INTC, CSCO • Healthcare: JNJ, PFE • ETFs: SPY, QQQ, IWM, VIX News sources include Yahoo Finance RSS, MarketWatch, CNBC, and optional NewsAPI integration.

■■ CONFIGURATION OPTIONS

The system offers flexible configuration through JSON files and environment variables: • Monitoring intervals (default: 5 minutes for news, 4 hours for analysis) • Symbol lists and keyword filters • Urgency thresholds and confidence levels • Telegram notification settings • API keys and rate limiting • Security through .env file separation

■ SYSTEM USAGE

Command	Purpose	Components Active
python unified_market_system.py	Complete system (Recommended)	News Monitor + Market Analysis
python start_news_monitor.py	Real-time alerts only	News Monitor only
python market_orchestrator.py	Analysis reports only	Market Analysis only
python launch_system.py	Interactive menu	User choice

■ Document generated on: 2025-10-25 19:24:34 ■ GitHub Repository: <https://github.com/maanto2/shareMarketTracker> ■ System Status: Fully operational with BUY/SELL recommendations