BackTrade: Trading Backtesting Platform

Project Specification Document
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Executive Summary

BackTrade is a deterministic multi-session historical trading simulator designed for professional traders and quantitative analysts. The platform enables users to conduct comprehensive backtesting sessions with real-time simulation controls, position management, and detailed performance analytics across multiple trading instruments and timeframes.

1. Platform Overview

Core Concept

BackTrade provides a deterministic historical trading environment where users can:

- Launch trading sessions at any historical timestamp
- Execute trades as if operating in real-time during past market conditions
- Control simulation speed, and pause.
- Run multiple concurrent sessions with different instruments and parameters
- Access comprehensive trading analytics and performance metrics

2. User Roles and Subscription Tiers

Role	Active Sessions	Pricing
Anonymous	0	Free
User	1	Free (no subscription)
Trader	10	Monthly subscription
Expert	30	Monthly subscription
Admin	Unlimited	Internal

Note: Active sessions are defined as sessions with status `RUNNING` or `PAUSED` (not `ARCHIVED`). Archiving a session frees up a slot for creating new sessions.

3. Core Functionality

3.1 Session Creation

Each user can create a session by specifying the trading instrument (e.g., XAUUSD, EURUSD), start and end timestamps, initial account balance, leverage multiplier, spread configuration (in ticks), slippage settings (in ticks), and commission structure (per trade).

3.2 Session Execution

Time Controls: Play/Pause functionality, variable speed settings (0.5x, 1x, 2x, 5x, 10x)

Trading Interface: Interactive candlestick charts with real-time position tracking.

3.3 Position Management

Order Types: Market orders only (Buy/Sell) and position sizing in standard lots with Take Profit (TP) levels and Stop Loss (SL) levels and Dynamic TP/SL modification

Position Controls: Individual position closure, Bulk position management (Close All)

3.4 Data Management

Admin-Controlled Data Loading: OHLCV data upload via CSV format and instrument/timeframe activation.

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4. Technical Limitations

- **Order Types**: Market orders only (no pending orders)
- **Execution Model**: Immediate fills only (no partial fills)
- **Data Granularity**: OHLCV-based simulation (no tick-level data)
- **Session Continuity**: Sessions pause when not actively viewed
- **Cost Structure**: Fixed spread, slippage, and commission models
- **Instrument Scope**: Single-instrument sessions only
- **Data Management**: Admin-controlled data uploads and CSV format requirement for historical data

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5. Future Development

Enhanced Order Management

- Complete order stack implementation (market, limit, stop orders)
- Order-to-trade-to-position lifecycle management
- Partial fill modeling and queue simulation

AI and Analytics Integration

- AI recommendation

Platform Expansion

- Strategy scripting and automation
- Economic calendar integration
- Market sentiment indicators