IBKR Live Data Streaming Latency Monitor

A Python application comprising two scripts—livedata.py and latencyapp.py—that together connect to the Interactive Brokers API to:

- **Stream** 5-second realtime bars for selected tickers and record raw data to CSV files (livedata.py).
- **Display** an interactive latency plot with moving average, statistics, and hover details (latencyapp.py).

Prerequisites

- Python 3.7+
- Interactive Brokers TWS or IB Gateway with API enabled
- pip packages:
  - ibapi
  - PyQt5
  - pyqtgraph
  - numpy

Installation

1. **Clone** this repository:
   git clone https://github.com/yourusername/ibkr-latency-monitor.git
   cd ibkr-latency-monitor

2. **Install** dependencies:
   pip install -r requirements.txt

Configuration

Environment variables (defaults shown):

- IB_HOST (default: 127.0.0.1)
- IB_PORT (default: 7496)
- IB_CLIENT_ID (default: 1)
- OUTPUT_DIR (default: ./candles)

To monitor different symbols, edit the TICKERS list in **livedata.py**.

Usage

1. **Start data streaming**:
   python livedata.py

    - Streams realtime bars and appends CSV files (<SYMBOL>.csv) in the output directory.
2. **Launch latency monitor**:
   python latencyapp.py

    - Opens a PyQt5 window showing live latency (ms) versus time.
    - The plot includes a 30-second moving average, min/max/avg stats, and hover details.
    - Press **Ctrl+C** or close the window to gracefully shut down and disconnect.

File Structure

```
.
├── livedata.py
├── latencyapp.py
├── requirements.txt
└── candles/
    └── *.csv
```

- livedata.py: Streams realtime bars to CSV.
- latencyapp.py: GUI for live latency plotting.
- requirements.txt: pip dependencies.
- candles/: CSV output directory.
    - *.csv: Raw realtime bar data.

License