

ChatGPT Usage Transparency

I used ChatGPT (GPT-5) primarily as a coding and debugging assistant during the implementation of this project.

All core logic, system design, and feature decisions — including the data ingestion flow, analytics computation, and Streamlit dashboard layout — were conceptualized and reasoned independently.

ChatGPT was used to:

- Interpret and break down the project requirements.
- Refine Python syntax and fix runtime issues (e.g., debugging WebSocket reconnections and Streamlit caching).
- Optimize the structure of multi-file workflow (data_ingestor.py, app.py, and run_all.py).
- Resolve compatibility warnings and environment setup errors during virtual environment configuration.
- Help structure the dashboard layout and improve user interaction design.

Example prompts used during debugging:

- “Why is my Streamlit app not refreshing even though data updates in SQLite?”
- “How can I safely auto-refresh my dashboard without breaking Streamlit caching?”
- “I’m getting ‘database is locked’ while inserting live ticks — how can I handle concurrent access?”
- “How can I show dual y-axes for Bitcoin and Ethereum prices in Plotly?”
- “My Streamlit dashboard shows *AttributeError: module 'streamlit' has no attribute 'experimental_rerun'*. How do I fix this?”
- “Make my README look clean and properly formatted for GitHub.”

Human Authorship and Validation:

- These interactions helped streamline implementation and improve reliability,
- but the analytics methodology, z-score logic, and overall workflow design were authored by me.
- No unverified or unreviewed AI output was submitted as final work.
- ChatGPT served solely as a developmental assistant to support comprehension, accelerate implementation, and improve documentation quality.