

Data Engineering Lead (Data Pipeline & Infrastructure)

Role:

- Manages data collection, cleaning, and storage.
- Ensures data quality and builds pipelines to supply live and historical data for the research team.
- Oversees access to APIs (Yahoo Finance, Alpha Vantage, or broker APIs) and databases.

Skills:

- Python scripting and working with APIs.
- SQL or basic database knowledge.
- Data wrangling (pandas, regex, etc.).
- Familiarity with cloud or local server setups (not mandatory but nice to have).

Execution & Systems Lead (Trading Automation / DevOps)

Role:

- Focuses on turning strategies into automated trading bots.
- Designs simulation environments (backtesting, paper trading).
- Manages integration with broker APIs (Interactive Brokers, Alpaca, Robinhood API for students).

Skills:

- Python for automation (async, scheduling).
- Experience with backtesting frameworks (Backtrader, Zipline, custom code).
- Knowledge of REST APIs and JSON handling.
- Basic understanding of software design principles (modules, testing, debugging).

Risk & Portfolio Management Lead (Risk Control & Evaluation)

Role:

- Oversees portfolio-level risk: diversification, exposure limits, drawdowns.
- Defines evaluation metrics (Sharpe ratio, max drawdown, volatility, etc.).
- Runs stress tests and makes sure strategies aren't overfit to past data.

Skills:

- Strong statistics & probability knowledge.
- Familiarity with risk-adjusted performance metrics.
- Python (pandas, matplotlib/seaborn for visualization).
- Some finance knowledge (CAPM, portfolio theory basics).