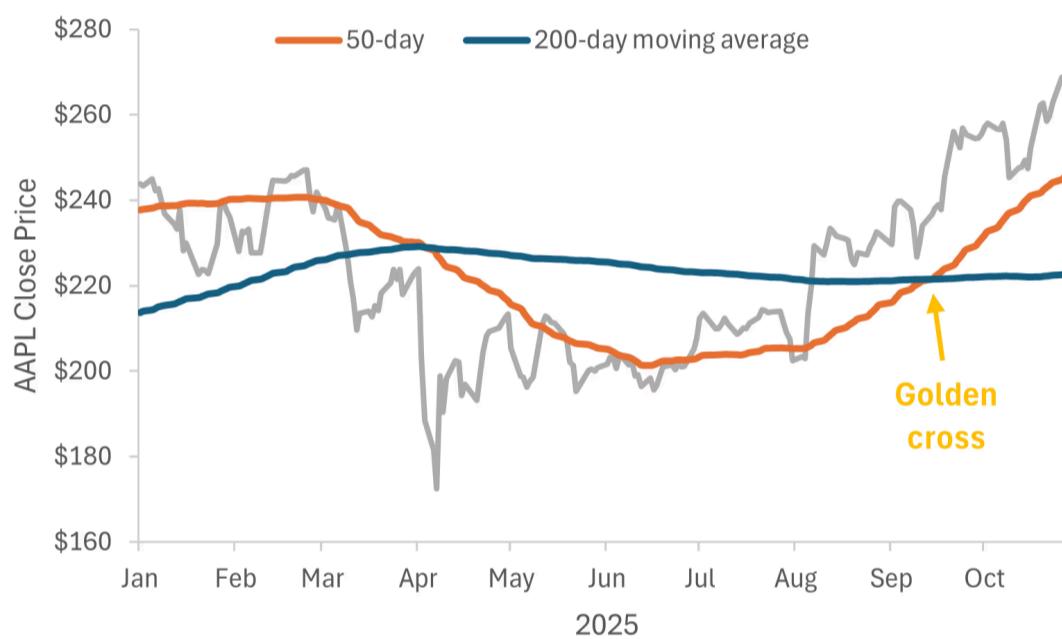


Turning Bullish

Your Objective

Your dataset for this drill contains daily closing prices for the **SPDR S&P 500 ETF Trust (SPY)** over the last 5 years.

Your task is to calculate the 50-day and 200-day moving averages based on the closing price, and identify every “Golden Cross” moment – **when the short-term average (50-day) crosses from below to above the long-term average (200-day)** – signaling a potential bull market.



To complete the drill, create a table containing the date, close price, and three new columns:

1. **50-day moving average:** The average closing price for the last 50 trading days, calculated for each date
2. **200-day moving average:** The average closing price for the last 200 trading days, calculated for each date
3. **Golden Cross:** A binary field (1/0) that equals 1 only on the exact date when the 50-day average crosses from below the 200-day average; otherwise 0

Date	Close Price	50-Day Avg	200-Day Avg	Golden Cross
2025-09-08	\$237.88	\$219.15	\$221.46	0
2025-09-09	\$234.35	\$219.82	\$221.49	0
2025-09-10	\$226.79	\$220.25	\$221.48	0
2025-09-11	\$230.03	\$220.69	\$221.49	0
2025-09-12	\$234.07	\$221.13	\$221.52	0
2025-09-15	\$236.70	\$221.59	\$221.55	1
2025-09-16	\$238.15	\$222.15	\$221.58	0
2025-09-17	\$238.99	\$222.73	\$221.60	0
2025-09-18	\$237.88	\$223.27	\$221.61	0
2025-09-19	\$245.50	\$223.93	\$221.65	0
2025-09-22	\$256.08	\$224.83	\$221.74	0

50-day is lower than 200-day average
← 50-day is now higher (Golden Cross!)