

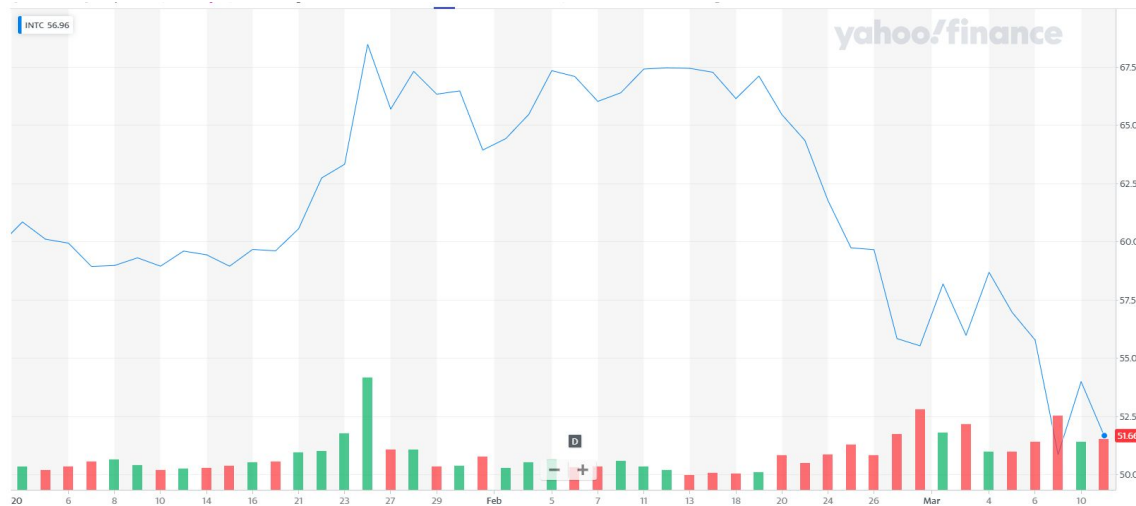
W209 Mid-Term Presentation

Stock Price Patterns

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Overview



Problem Statement

Basic stock charts provide limited info:

- Price
- Volume
- Dividend dates

Additional stock info requires:

- Knowledge of technical indicators
- Fees for subscriptions and consultations

Overview

Project Concept

- 1) Visualize additional, existing stock data.
 - a) Earnings announcement dates
- 2) Create simple, derived metrics.
 - a) Daily price change
 - b) Overnight price change

Target Audience

- 1) Financial analysts and pundits
 - a) Identify and share investment opportunities.
- 2) Active, short-term investors
 - a) Use data-driven analysis to assess potential risk and reward.
 - b) Supplement existing strategies with new, easy-to-understand metrics.

Data Pipeline

Current Data Source (static)

[Kaggle dataset](#) with 20 years of prices, dividends, earnings.



Future Data Source (dynamic)

[Python package](#) for latest stock info.



Data Wrangling

- 1) Join prices, dividends, and earnings into single dataset.
- 2) Add derived columns:
 - a) Next Open, Next Close
 - b) Prev Open, Prev Close
- 3) Output to csv file.

Test Plan

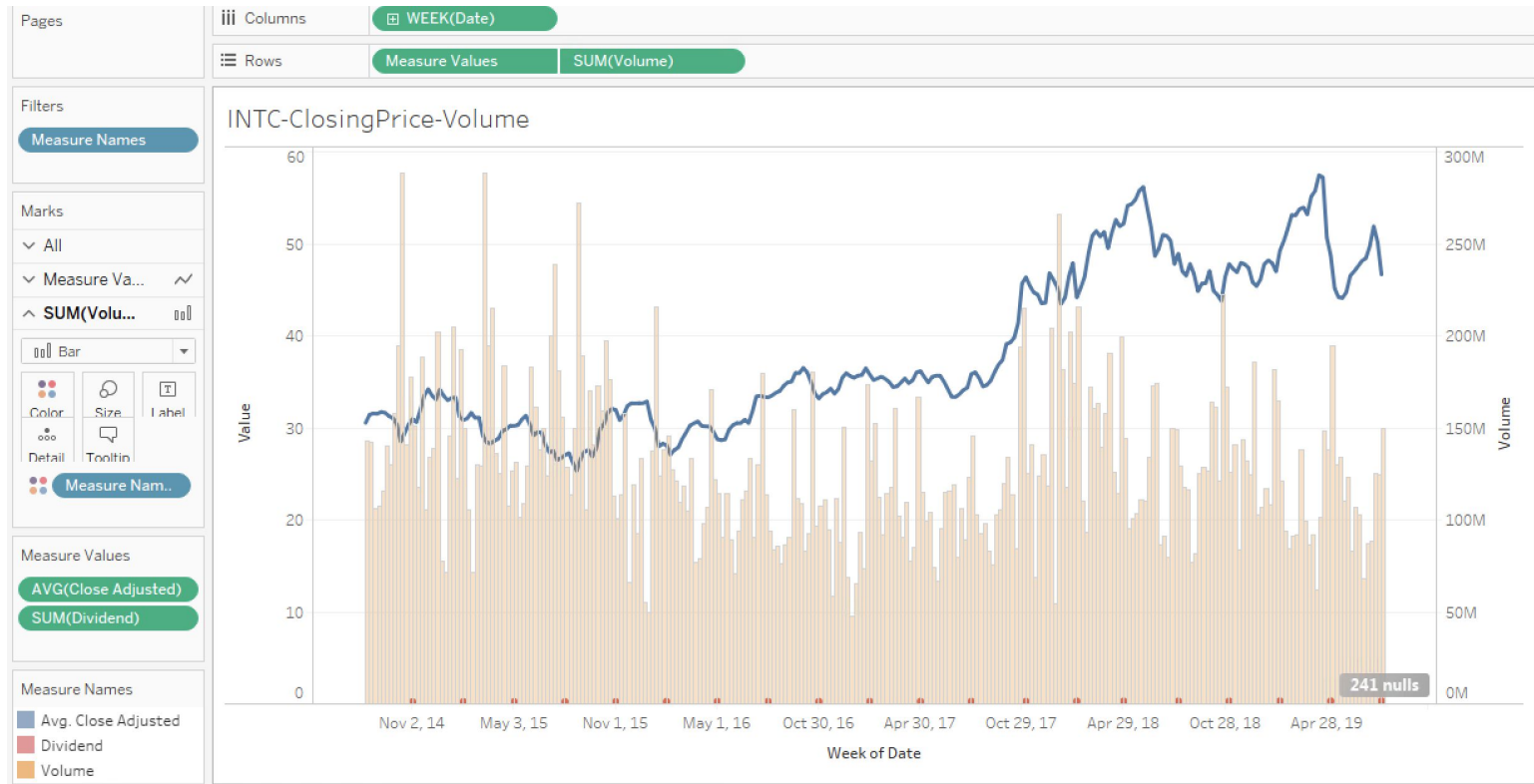
- 1) Verify numerical accuracy of charts through manual calculations and spot-checking.
- 2) Enlist pilot users, including ourselves, to interact with visualizations and provide feedback:
 - a) Ease-of-use
 - b) Usefulness
 - c) Bug reports
 - d) Enhancement ideas

Tableau Visualizations

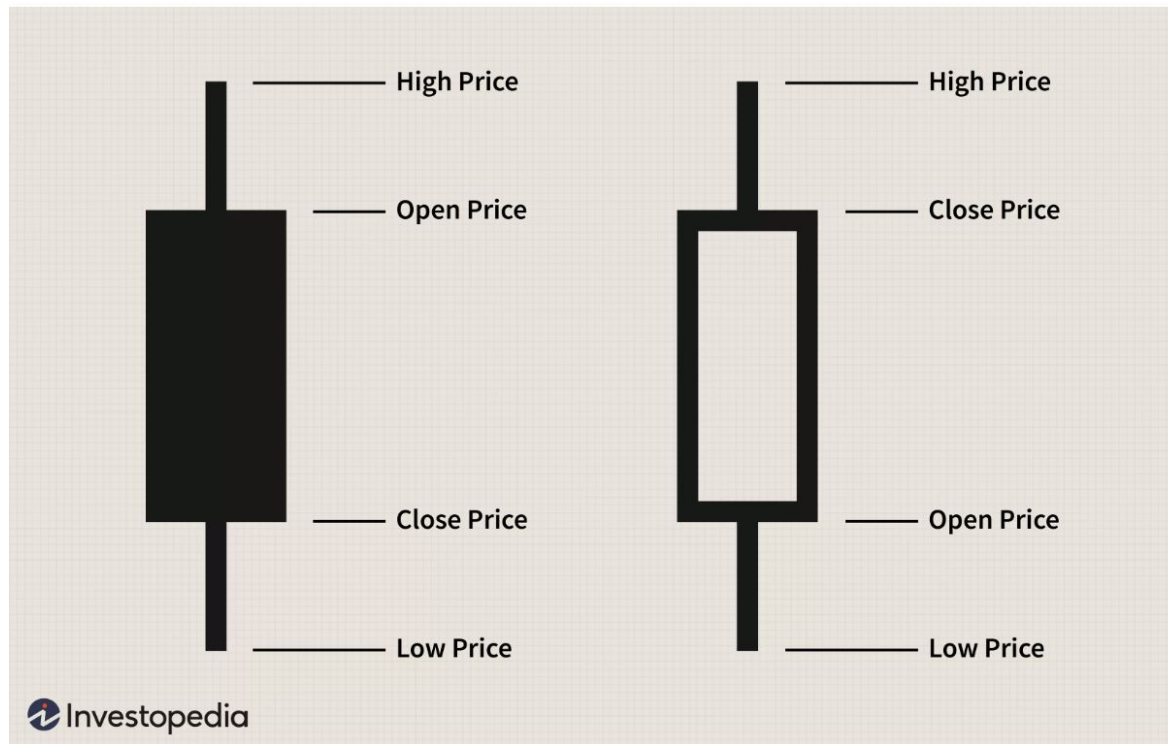
Intel Stock Chart - Yahoo Finance



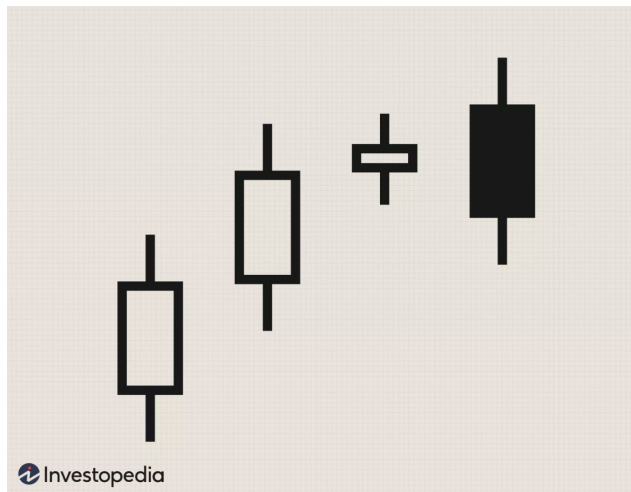
Intel Stock Chart - Recreated



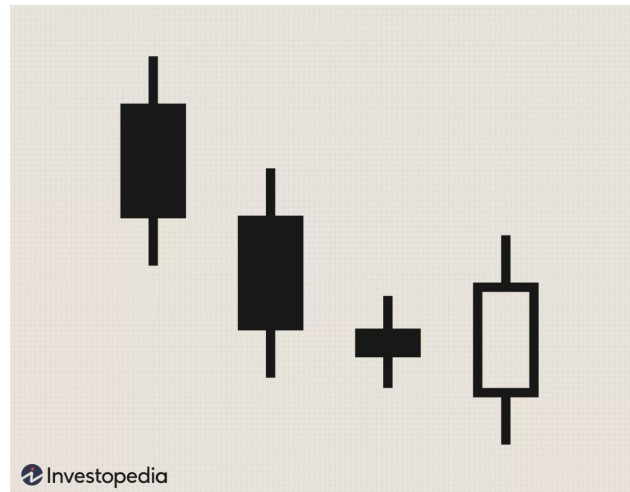
CandleStick Chart - What is it?



CandleStick Chart - Why is it useful?



Bearish Engulfing Pattern

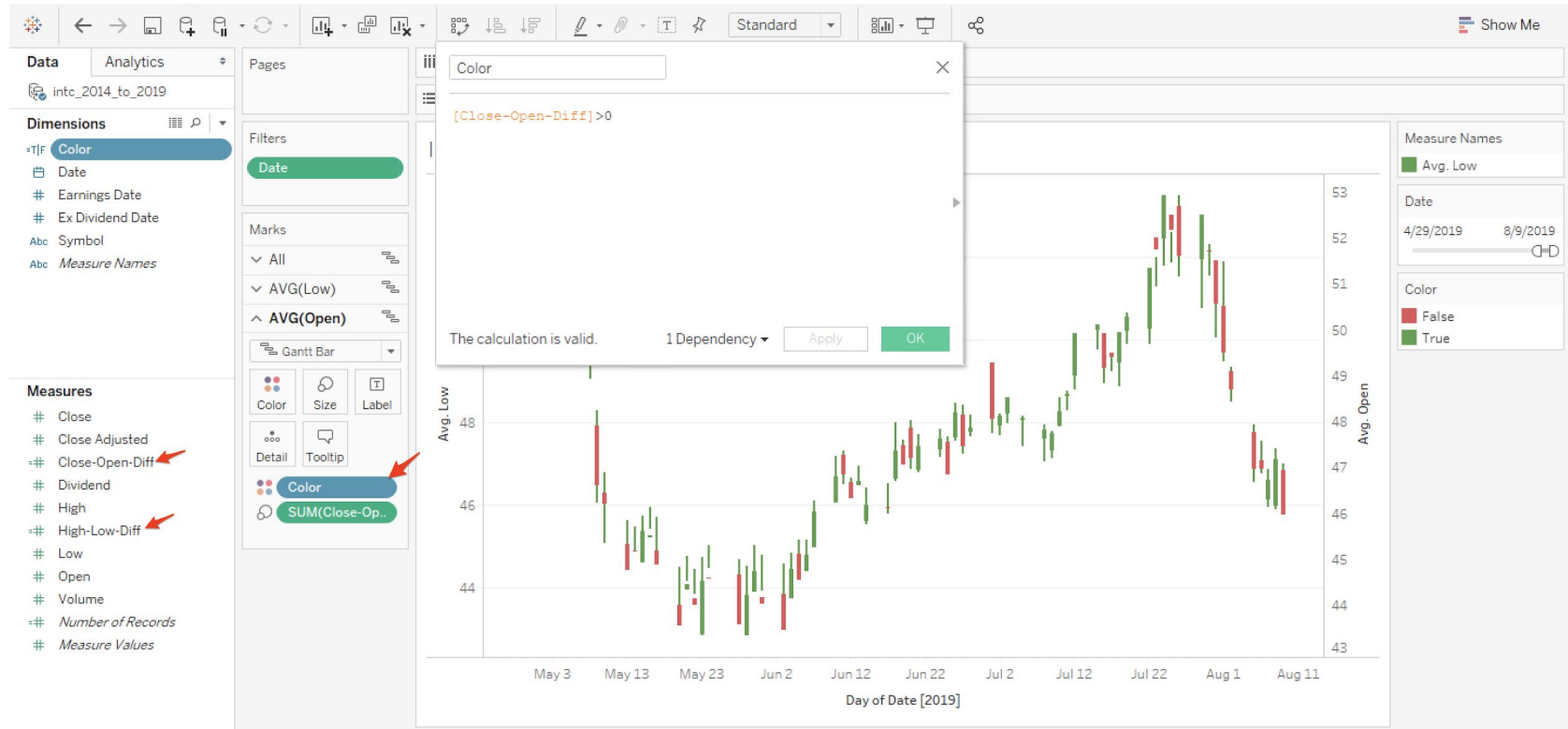


Bullish Engulfing Pattern

Intel CandleStick Chart



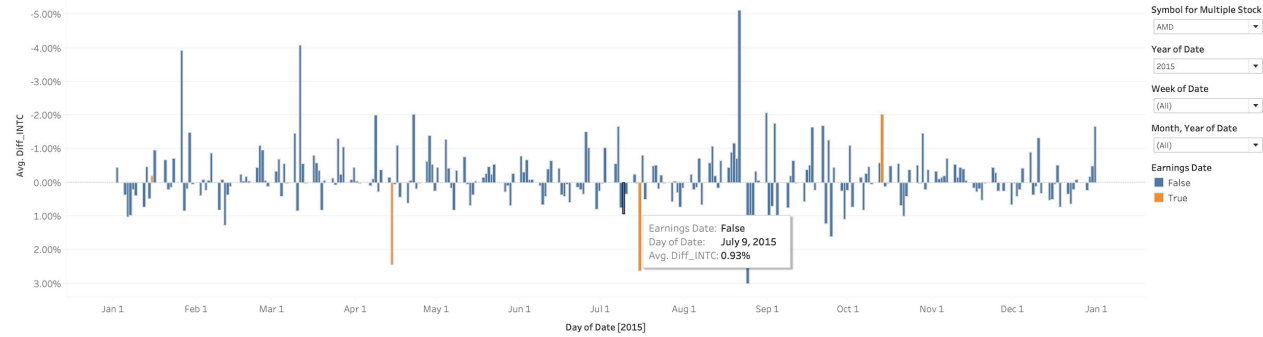
Intel CandleStick Chart - How did we build it?



Demo

Latest Tableau Dashboard

Single Stock Price Change



Multiple Stock Price Change

