# Detecting Anomalies and Intersecting with Google Trends

\*\*Detecting Deviations from Normal Trading Behavior and Intersecting with Google Trends\*\*  
  
### Objective:  
Identify trading anomalies and correlate them with Google Trends data to understand external influences on herd behavior.  
  
### Steps:  
1. \*\*Detect Deviations in Trading Behavior\*\*:  
 - Use anomaly detection models (e.g., Isolation Forest, DBSCAN) to find periods of unusual activity.  
 - Features include trading volume, price deviations, and correlations.  
  
2. \*\*Fetch Trends Data\*\*:  
 - Use Google Trends API to gather search interest data for relevant terms (e.g., "Bitcoin," "stock crash").  
 - Align trends data with trading anomalies.  
  
3. \*\*Intersection Analysis\*\*:  
 - Use cross-correlation to measure relationships between trading anomalies and trends data.  
 - Identify if trends precede or coincide with market anomalies.  
  
### Tools:  
- Python libraries: pytrends, scikit-learn, statsmodels (for correlation analysis).  
- Data sources: Historical stock data, Google Trends API.  
  
### Outcome:  
Insights into how external search trends influence herd behavior in financial markets, providing a holistic view of market sentiment.