

Building AI Agents with AutoGen

Finance Report Analyst and Tools

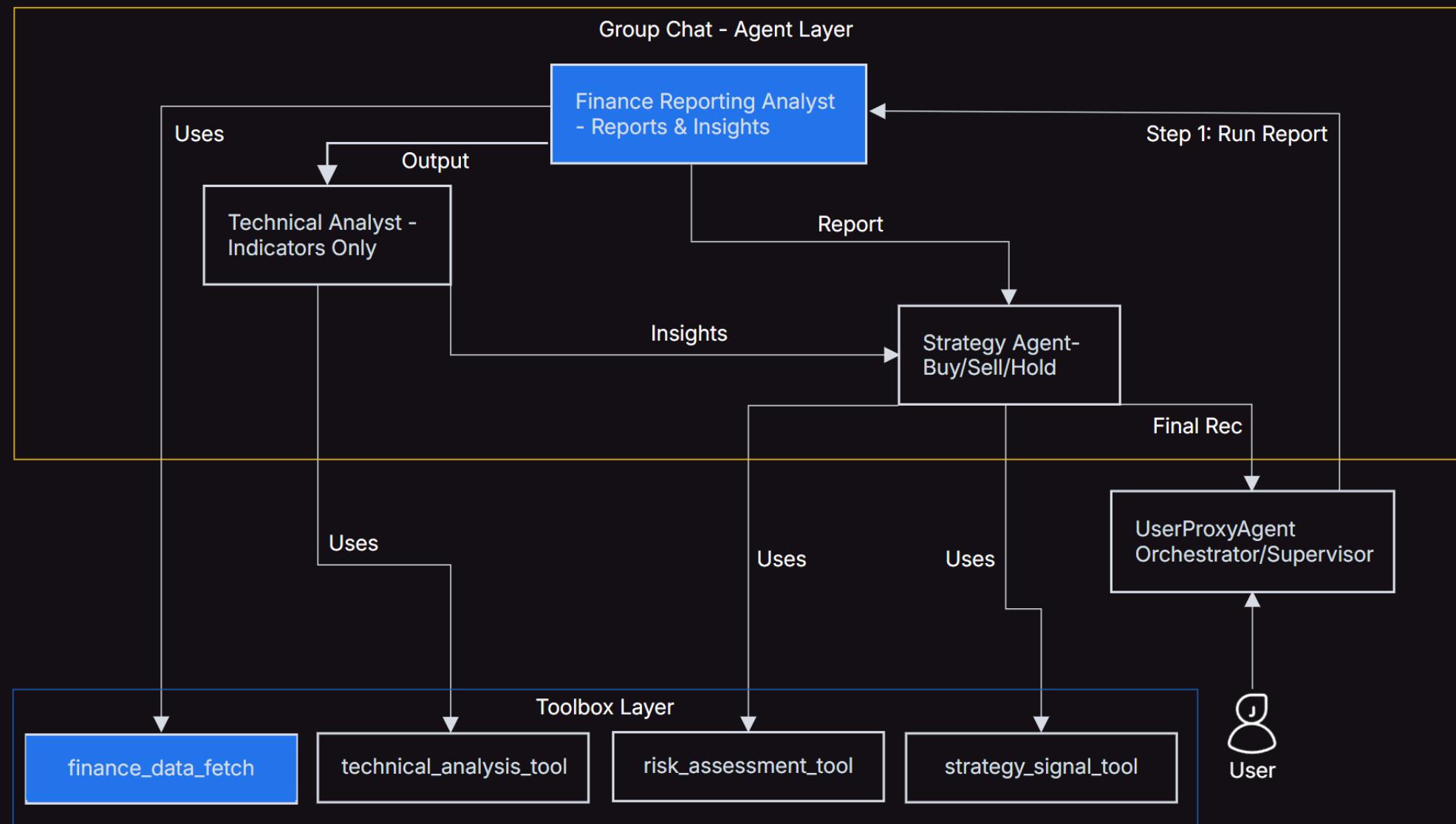
Nitin Agarwal

Principal Data Scientist

Ex-Microsoft

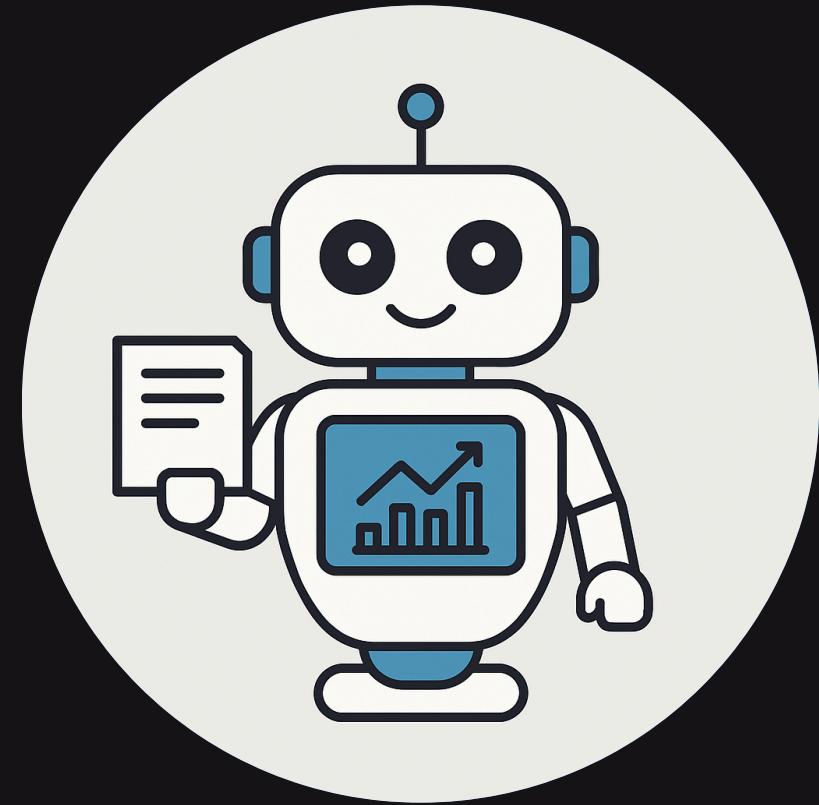


Agents and Tools for Financial Analysis



Agent 1 – Finance Reporting Analyst

- **Role**
 - Generate markdown-based financial reports from stock data
- **Responsibilities**
 - Fetch data via tools
 - Compute financial metrics, ratios
 - Create initial analysis report in a markdown format
- **Constraints**
 - No hallucinations, must reflect uncertainty
- **Tool Used**
 - `finance_data_fetch`



Tool 1: finance_data_fetch

- **Purpose:** Fetch basic financial and historical stock data
- **Inputs:** stock ticker, period (optional, default = 1mo)
- **Metrics Extracted:**
 - Company info (name, market cap, price, ratios)
 - Historical closing prices
- **Used by:** finance_reporting_analyst
- **Error Handling:** Graceful fallback with error message in JSON

```
{  
  "name": "finance_data_fetch",  
  "data": {  
    "name": "Apple Inc.",  
    "symbol": "AAPL",  
    "currentPrice": 192.32,  
    "currency": "USD",  
    "summary": "Apple Inc. designs, manufactures, and markets smartphones, personal computers, tablets...",  
    "marketCap": 300000000000,  
    "peRatio": 29.87,  
    "priceToBook": 45.3,  
    "dividend": 0.92,  
    "recentClosePrices": {  
      "2024-06-01": 189.50,  
      "2024-06-02": 190.40,  
      "2024-06-03": 191.70,  
      "2024-06-04": 192.32  
    }  
}
```

Hands-On