"Identification & Justification of Process Model" of Market Sentiment Analyzer (Sentilytics)

✅ Identification & Justification of Process Model

For the development of **Sentilytics – Market Sentiment Analyzer**, we have selected the **Agile Process Model**, specifically adopting **Scrum** methodology.

✅ Justification:

1. **Iterative Development**:
   Sentilytics requires integration of multiple components like data ingestion, NLP, visualization, and security. Agile allows us to build and refine these modules in **sprints**, ensuring early testing and feedback.
2. **Evolving Requirements**:
   As the project deals with real-time APIs (Twitter, News, Market Prices), requirements such as data formats, API limits, or analysis techniques may change frequently. Agile helps accommodate these changes with **minimal disruption**.
3. **Continuous Integration & Testing**:
   Agile supports regular code reviews, testing (SonarQube integration), and quality checks, aligning with our **CI/CD goals and code quality standards**.
4. **Team Collaboration & Ownership**:
   Agile emphasizes **daily stand-ups, sprint planning, reviews, and retrospectives**, enabling better coordination between developers, data engineers, and frontend/backend leads.
5. **Incremental Delivery**:
   Each sprint results in a **working prototype**, allowing early stakeholder validation. For example, initial sprints focus on sentiment classification; later sprints integrate visualization and price correlation overlays.

🔍 Conclusion:

Agile (Scrum) is the most suitable process model for Sentilytics due to its adaptability, focus on iterative improvement, support for evolving tech components, and ability to ensure fast, secure, and quality-driven deployment.