## SEMANTIC ANALYSIS

Purpose: Analyze the semantic content of documents to identify topics, terms, and their relationships.

Stens:

- 1. **Term Frequency Analysis -** Calculate frequency of terms and phrases
- 2. Co-occurrence Detection Identify terms that
- 3. **Topic Modeling -** Discover topics and themes across
- 4. Topic Tracking Track how topics evolve across documents

## Outputs:

- Term frequency statistics
- Co-occurrence matrices
- Topic clusters
- Topic evolution data

# Dependencies:

- Foundation Analysis Phase

## STRUCTRAL ANALYSIS

Purpose: Analyze the structural elements of

legal arguments and reasoning.

#### Steps:

- IRAC Component Identification Identify Issues, Rules, Applications, Conclusions
- 2. Toulmin Model Analysis Identify Claims, Data

#### Warrants, Backing

- 3. **Legal Precedent Matching -** Connect arguments to relevant case law
- 4. Citation Analysis Analyze the network of legal citations Outputs:
- Structured IRAC components
- Structured Toulmin model components
- Relevant precedents
- Citation network

## Dependencies:

- Foundation Analysis Phase

## **RELATIONAL ANALYSIS**

**Purpose:** Map relationships between entities and identify patterns in these relationships.

### Stone:

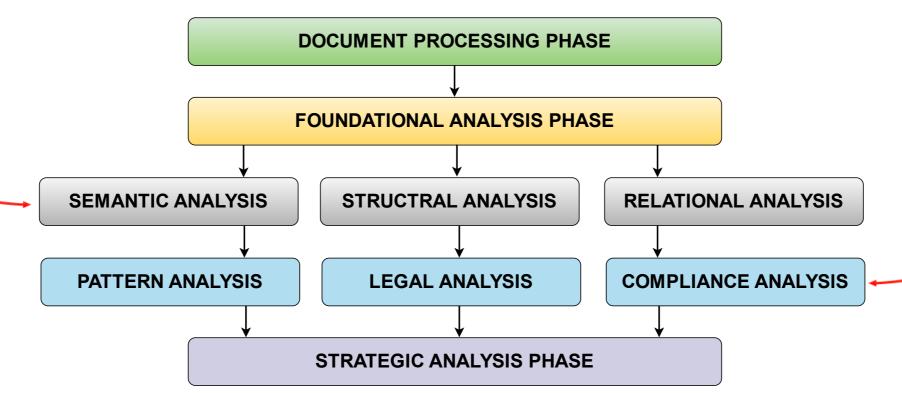
- Relationship Mapping Create graph of relationships between entities
- 2. **Knowledge Graph Construction -** Build comprehensive knowledge graph
- Cross-document Relationship Analysis Analyze relationships across documents

# Outputs:

- Entity relationship graph
- Knowledge graph
- Cross-document relationship data

# Dependencies:

- Foundation Analysis Phase



### PATTERN ANALYSIS

**Purpose:** Identify patterns, trends, and anomalies across documents and entities.

#### Stens:

- 1. Pattern Detection Identify recurring patterns in documents and entities
- 2. **Similarity Analysis -** Find similar documents, entities, and arguments
- 3. **Anomaly Detection -** Identify outliers and unusual patterns
- 4. Trend Analysis Track how patterns evolve over time

## Outputs:

- Identified patterns
- Similarity matrices
- Anomaly reports
   Trend data

# Dependencies:

- Semantic Analysis Phase
- Relational Analysis Phase

## LEGAL ANALYSIS

Purpose: Analyze legal issues, violations, and

#### Steps:

- 1. Violation Detection Identify Brady violations,
- fabricated evidence, misconduct
- 2. **Contradiction Detection -** Identify contradictions between statements/documents
- 3. **Causal Chain Reasoning -** Establish causal relationships between events/actions

# Outputs:

- Detected violations
- Identified contradictions
   Causal chains
- Dependencies:
- Structural Analysis Phase
- Pattern Analysis Phase

# COMPLIANCE ANALYSIS

**Purpose:** Generate strategic recommendations and motion suggestions.

## teps:

- Strategy Generation Develop legal strategies based on all analyses.
- Motion Recommendation Suggest specific motions
   Outcome Prediction Predict potential outcomes of
- Outcome Prediction Predict potential outcomes of different strategies

# Outputs:

- Strategic recommendations
- Suggested motions
- Outcome predictions

# Dependencies:

- Pattern Analysis Phase
- Legal Analysis Phase
- Compliance Analysis Phase