



**SAN JOSÉ STATE
UNIVERSITY**



AI Testing – Testing Quality Assessment

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Smart Technology, Computing, and Complex Systems**

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AI System Testing Quality Parameters

**AI Function
Feature Accuracy**



**AI Function
Completeness**



**AI Function Feature
Consistency**



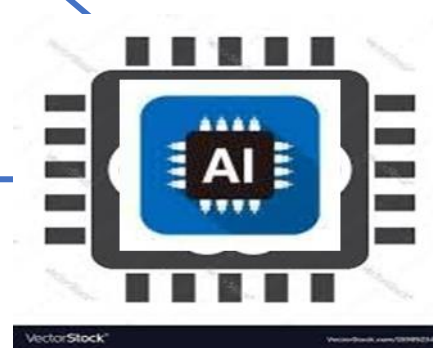
**AI Function
Relevancy**



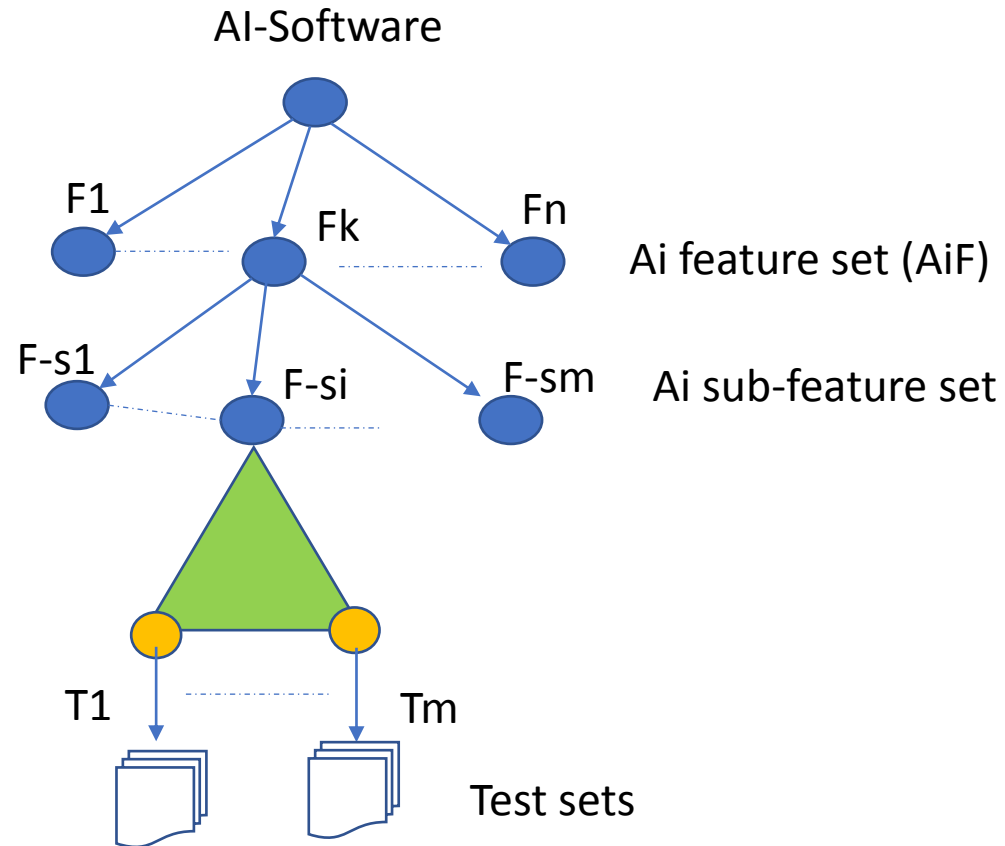
**AI Function
Feature
Correctness**



AI Currency

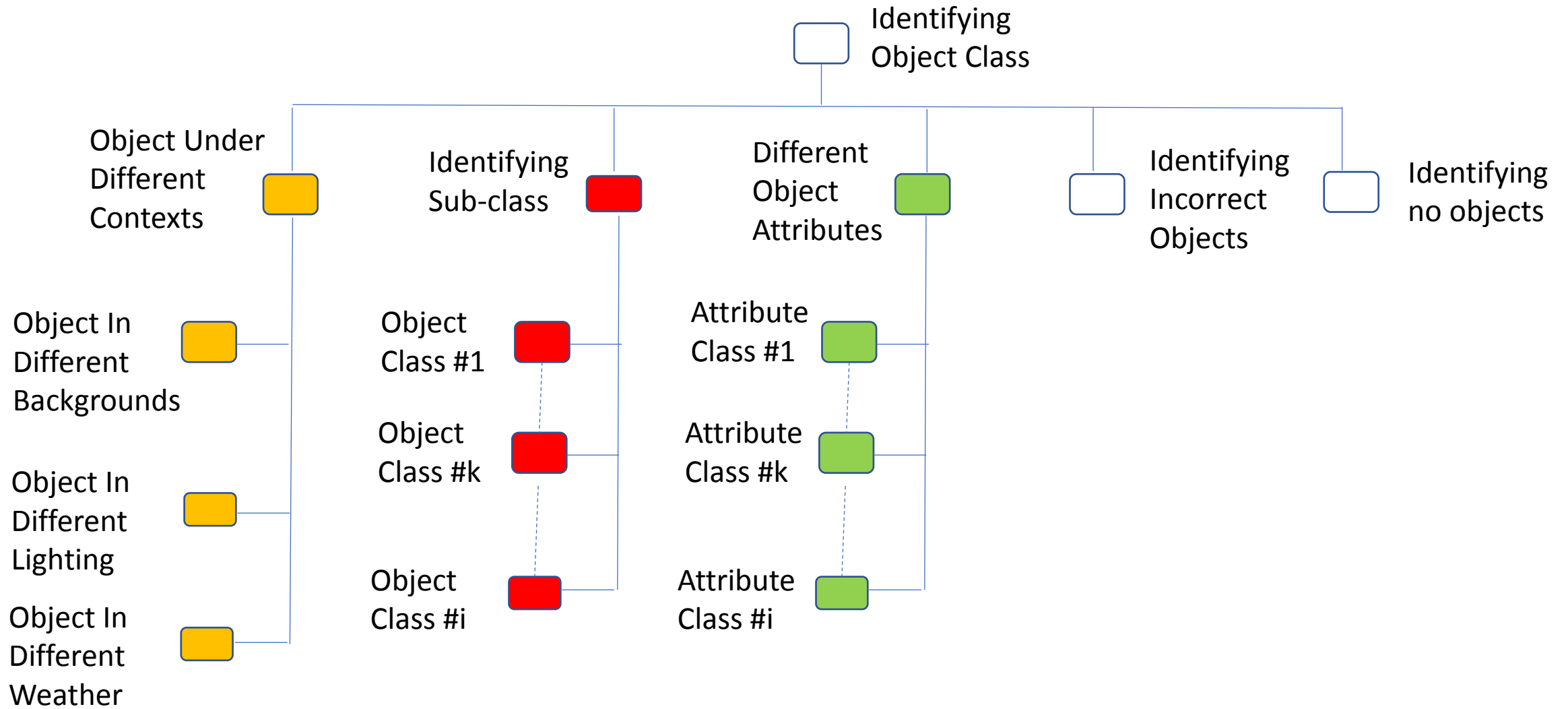


AI Software Test Modeling

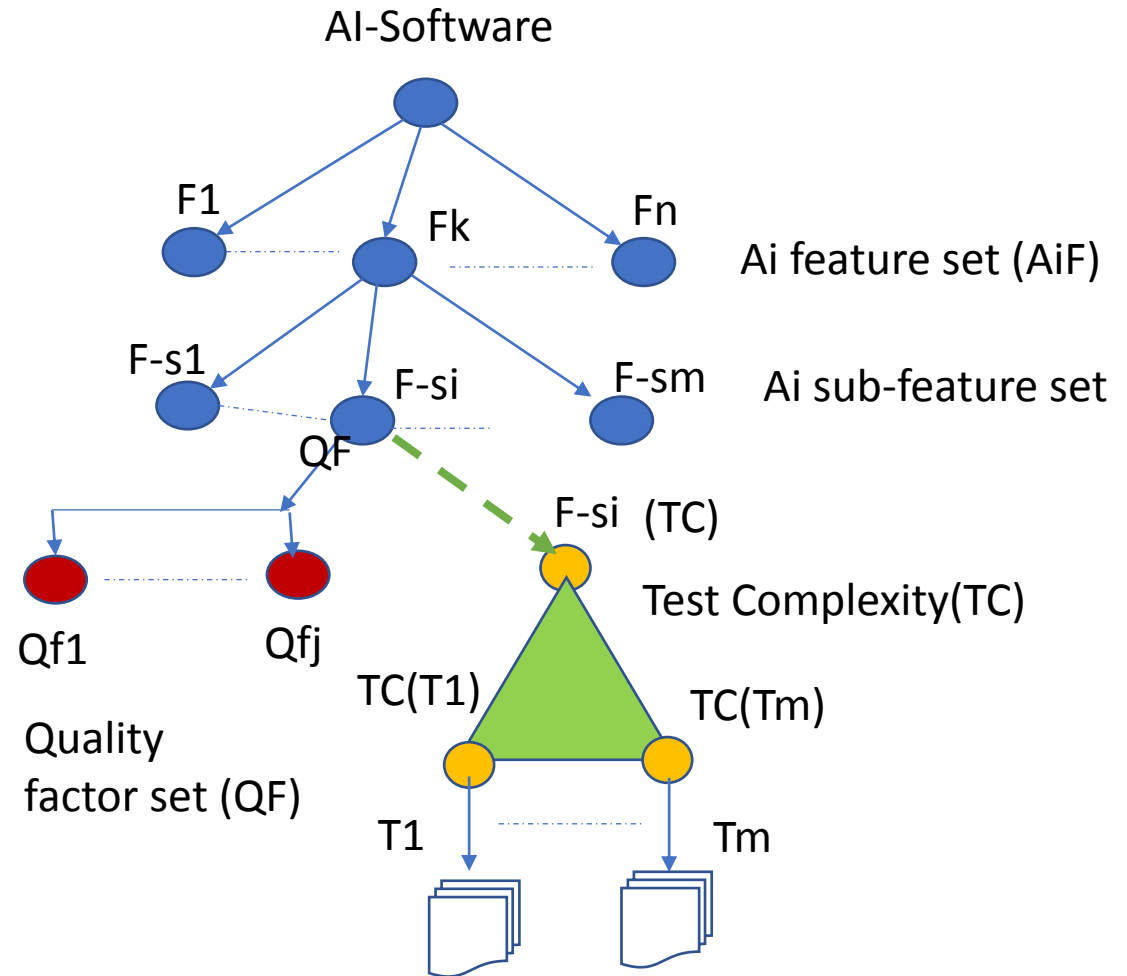
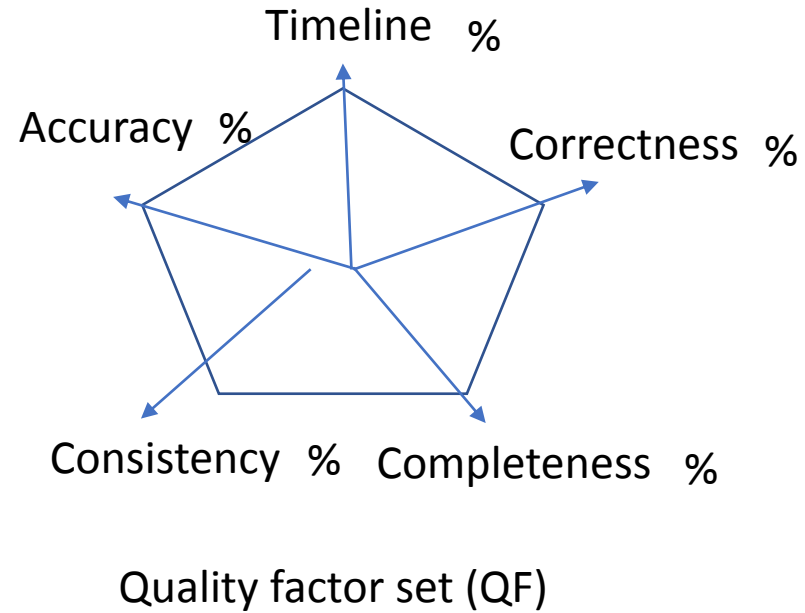


- AI knowledge test model
- AI feature test model
- Object test model
- Data test model

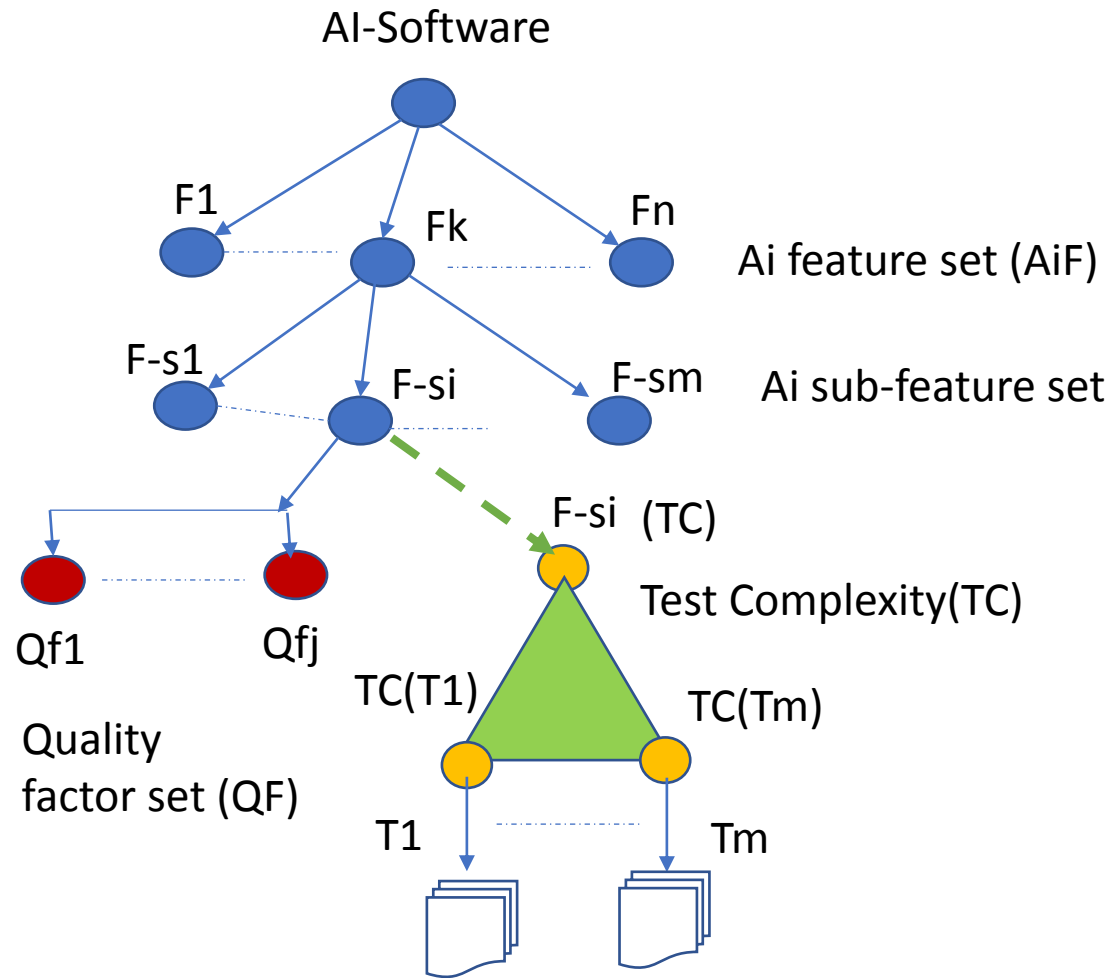
AI Software Test Modeling



AI Software Test Quality Assessment



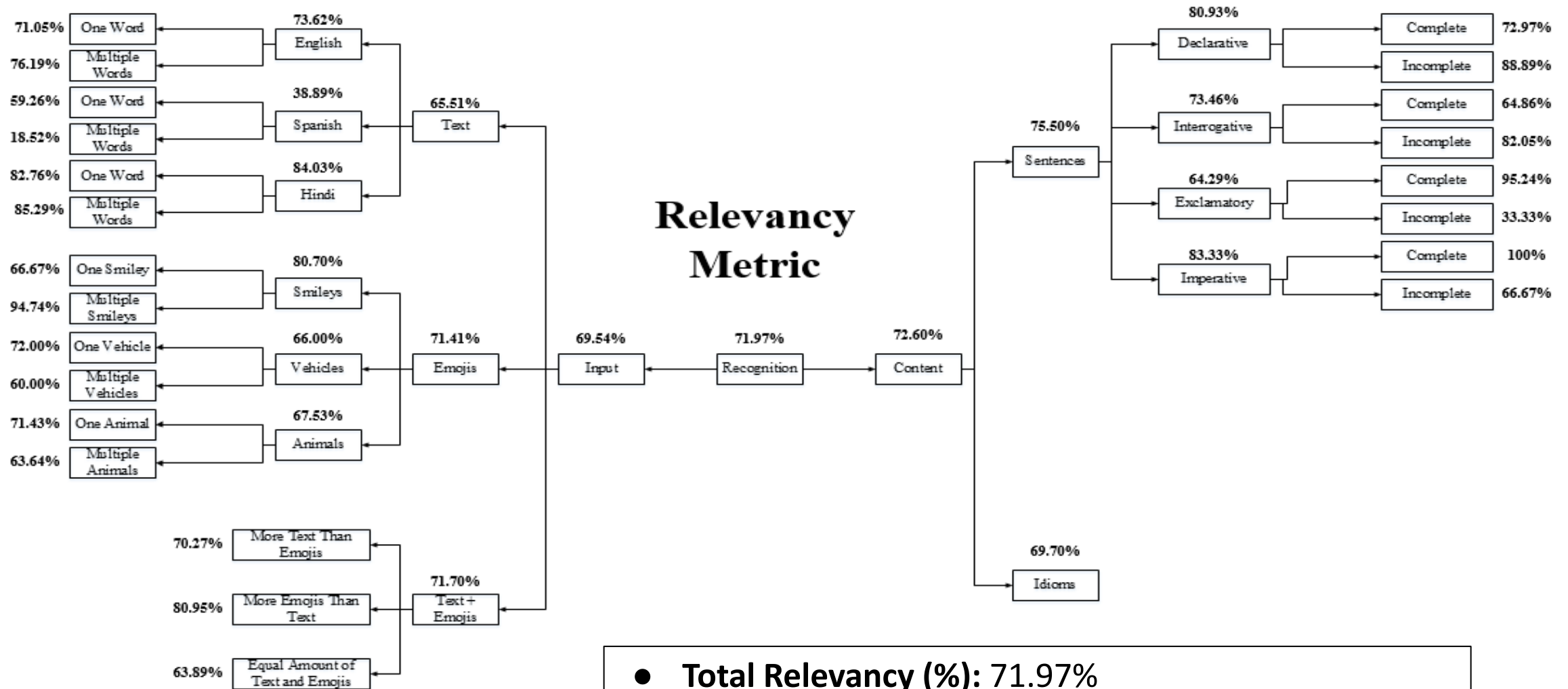
AI Software Test Adequacy and Coverage



- AI knowledge model test coverage
- AI feature test coverage
- Ai sub-feature test coverage
- AI feature classification test coverage
- Object-model test coverage
- Object classification test coverage
- Object context test coverage
- Object relation test coverage
- Data-model test coverage
- Data classification test coverage
- Data relation test coverage
- Data format test coverage
- Data range test coverage

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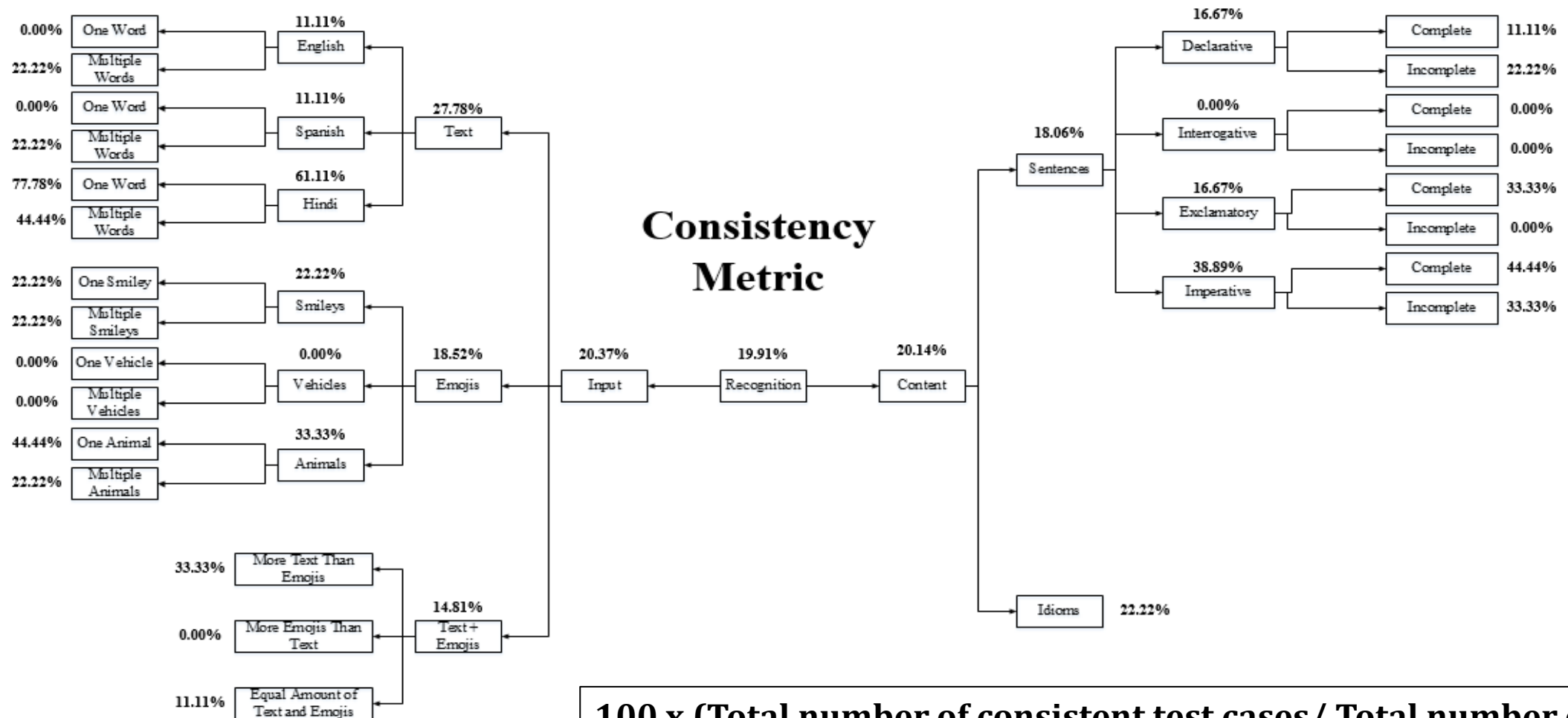
Relevancy Metric



- **Total Relevancy (%): 71.97%**

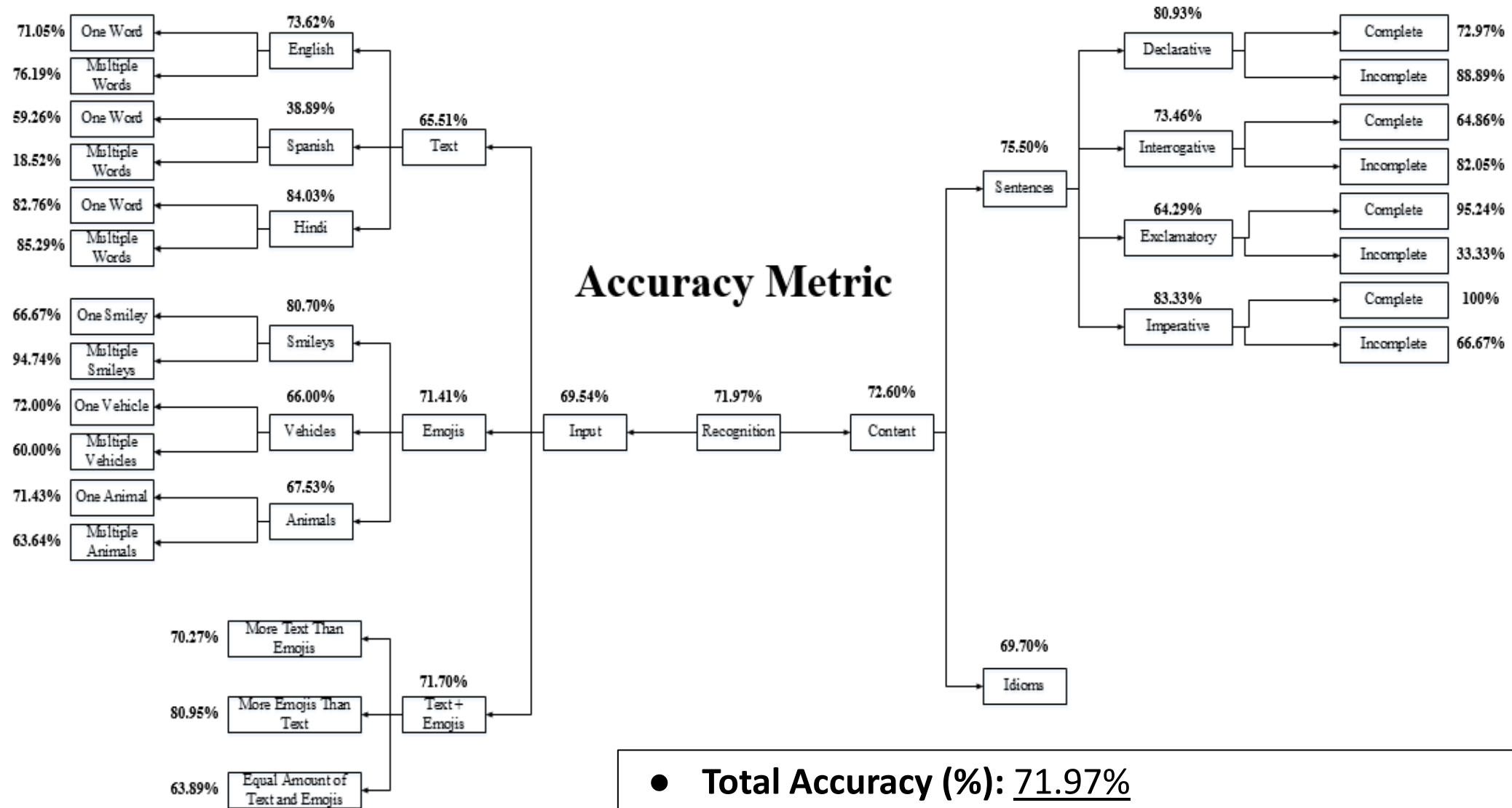
- $100 \times (\text{Acceptable Replies} / \text{Total Replies}) = 570 / 792$
- Same formula applies to all nodes

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100 x (Total number of consistent test cases/ Total number of consistent test cases + Total number of inconsistent test cases)=43/216
 So we got Consistency as **19.91%**

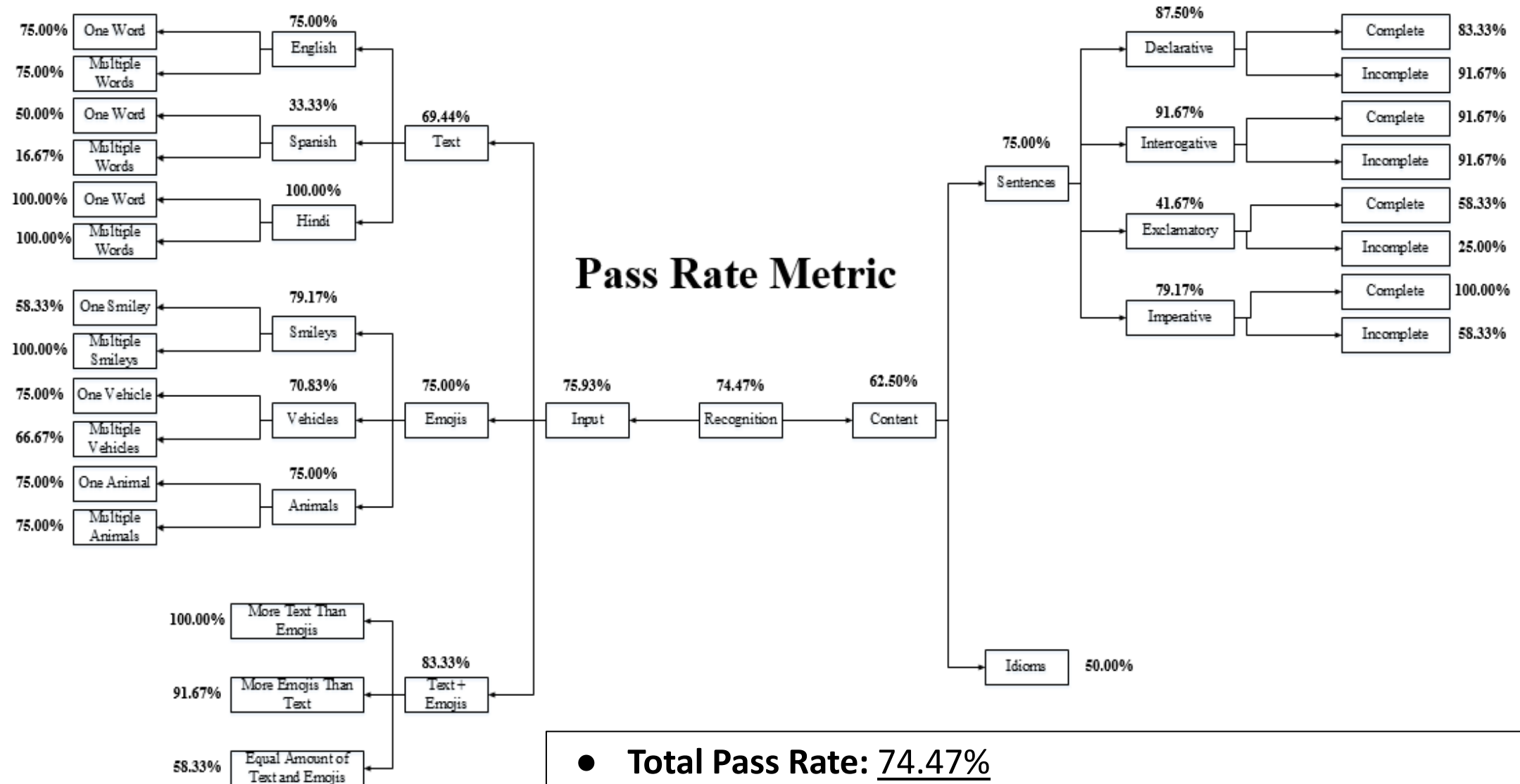
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- **Total Accuracy (%): 71.97%**

- $100 \times (\text{Acceptable Replies} / \text{Total Replies}) = 570 / 792$
- Same formula for all nodes

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- **Total Pass Rate: 74.47%**

- $100 \times (\text{Total Pass} / (\text{Total Pass} + \text{Total Failed})) = 100\% \times (210 / (210 + 72))$
- Same formula applies to all nodes

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