

**Model: gpt-3.5-turbo**

**Document: 2page rice document**

**Date: 19/03/2025 (RE-TEST)**

**Technique: Few-shot learning**

**Context 1 – Crop module**

ChatCompletionMessage(content='{\n

"ClassAssertion": {\n "Class": "Variety",\n "Individuals": [\n "Dahanala",\n "Kaluheenati",\n "Kalubalawee",\n "Bg379-2",\n "Bg300",\n "Bg403",\n "Bg304",\n "Bg357",\n "Bg358",\n "Bg360",\n "Ptb33"\n ]\n },\n

"ObjectPropertyAssertion":  
{\n "Axiom": "Dahanala hasSoilTypeforVariety ClaySoil",\n "Domain": "Variety",\n "Range": "SoilType"\n },\n

"DataPropertyAssertion": {\n "Axiom": "Dahanala averagePlantHeight 110",\n "Domain": "Variety",\n "Range": "integer"\n }\n}'

**Context2 – P&D module**

ChatCompletionMessage(content='````json\n{\n

"ClassAssertion": [\n {\n "Class": "GrowingProblem",\n "Individuals": ["Thrips", "BrownPlantHopper", "YellowStemBorer", "RiceLeafFolder"]\n },\n {\n

"Class": "CausalAgent",\n "Individuals": ["Thrips", "BrownPlantHopper", "YellowStemBorer", "RiceLeafFolder"]\n },\n {\n

"Class": "Symptom",\n "Individuals": ["LeafRolling", "HopperBurn", "DeadHeart", "LeafFolding"]\n },\n {\n

"Class": "PreventionMethod",\n "Individuals": ["SubmergingInfestedCrops", "DrainingPaddyField", "LandPreparation", "WeedManagement"]\n },\n {\n

"Class": "ApplicationMethod",\n "Individuals": ["WetClothDrag", "InsecticideApplication", "SeedDressingFormulation", "RecommendedPlantSpacing"]\n }\n ],\n

"ObjectPropertyAssertion": [\n {\n

"Axiom": "Thrips hasCausalAgent Thrips",\n "Domain": "GrowingProblemEvent",\n "Range": "CausalAgent"\n },\n {\n

"Axiom": "BrownPlantHopper hasCausalAgent BrownPlantHopper",\n "Domain": "GrowingProblemEvent",\n "Range": "CausalAgent"\n },\n {\n

"Axiom": "YellowStemBorer hasCausalAgent YellowStemBorer",\n "Domain": "GrowingProblemEvent",\n "Range": "CausalAgent"\n },\n {\n

```

"Axiom": "RiceLeafFolder hasCausalAgent RiceLeafFolder",\n
"Domain": "GrowingProblemEvent",\n
"Range": "CausalAgent"\n },\n {\n

"Axiom": "LeafRolling hasSymptom LeafRolling",\n
"Domain": "GrowingProblemEvent",\n
"Range": "Symptom"\n },\n {\n

  "Axiom": "HopperBurn hasSymptom HopperBurn",\n
"Domain": "GrowingProblemEvent",\n
  "Range": "Symptom"\n },\n {\n

"Axiom": "DeadHeart hasSymptom DeadHeart",\n
  "Domain": "GrowingProblemEvent",\n
"Range": "Symptom"\n },\n {\n

"Axiom": "LeafFolding hasSymptom LeafFolding",\n
"Domain": "GrowingProblemEvent",\n
"Range": "Symptom"\n },\n {\n

"Axiom": "SubmergingInfestedCrops hasPreventionMethod SubmergingInfestedCrops",\n  "Domain":\n
"PreventionMethod",\n
"Range": "PreventionMethod"\n },\n {\n

"Axiom": "DrainingPaddyField hasPreventionMethod DrainingPaddyField",\n
"Domain": "PreventionMethod",\n
"Range": "PreventionMethod"\n },\n {\n

"Axiom": "LandPreparation hasPreventionMethod LandPreparation",\n
"Domain": "PreventionMethod",\n
"Range": "PreventionMethod"\n },\n {\n

"Axiom": "WeedManagement hasPreventionMethod WeedManagement",\n
"Domain": "PreventionMethod",\n
"Range": "PreventionMethod"\n },\n {\n

"Axiom": "WetClothDrag hasApplicationMethod WetClothDrag",\n
"Domain": "ApplicationMethod",\n
"Range": "ApplicationMethod"\n },\n {\n

"Axiom": "InsecticideApplication hasApplicationMethod InsecticideApplication",\n
"Domain": "ApplicationMethod",\n
"Range": "ApplicationMethod"\n },\n {\n

"Axiom": "SeedDressingFormulation hasApplicationMethod SeedDressingFormulation",\n
"Domain": "ApplicationMethod",\n
"Range": "ApplicationMethod"\n },\n {\n

"Axiom": "RecommendedPlantSpacing hasApplicationMethod RecommendedPlantSpacing",\n
"Domain": "ApplicationMethod",\n
"Range": "ApplicationMethod"\n },\n ],\n

"DataPropertyAssertion": []\n}\n```\n',

```

**Model: gpt-4o.mini**

**Document: 2page rice document**

**Date: 19/03/2025 (RE-TEST)**

**Technique: Few-shot learning**

### Context 01 – Crop Module

**ChatCompletionMessage(content='Here\'s the JSON output for the assertional axioms based on the provided ontology description:\n\n```\njson\n{\n**

**"ClassAssertional": {\n**

**"Class": "Variety",\n**

**"Individuals": ["Dahanala", "Kaluheenati", "Kalubalawee", "Bg379-2", "Bg300", "Bg403", "Bg304", "Bg357", "Bg358", "Bg360", "Ptb33"]\n},\n**

**"ObjectPropertyAssertional": [\n**

**{\n "Axiom": "Dahanala hasSoilTypeforVariety ClaySoil",\n**

**"Domain": "Variety",\n**

**"Range": "SoilType"\n**

**},\n {\n**

**"Axiom": "Kaluheenati hasSoilTypeforVariety ClaySoil",\n**

**"Domain": "Variety",\n**

**"Range": "SoilType"\n },\n {\n**

**"Axiom": "Kalubalawee hasSoilTypeforVariety ClaySoil",\n**

**"Domain": "Variety",\n**

**"Range": "SoilType"\n },\n {\n**

**"Axiom": "Bg379-2 hasSoilTypeforVariety LoamySoil",\n**

**"Domain": "Variety",\n**

**"Range": "SoilType"\n },\n {\n**

**"Axiom": "Bg300 hasSoilTypeforVariety LoamySoil",\n**

**"Domain": "Variety",\n**

**"Range": "SoilType"\n },\n {\n**

**"Axiom": "Bg403 hasSoilTypeforVariety SandySoil",\n**

**"Domain": "Variety",\n**

**"Range": "SoilType"\n },\n {\n**

**"Axiom": "Bg304 hasSoilTypeforVariety LoamySoil",\n**

**"Domain": "Variety",\n**

**"Range": "SoilType"\n },\n {\n**

**"Axiom": "Bg357 hasSoilTypeforVariety SandySoil",\n**

**"Domain": "Variety",\n**

**"Range": "SoilType"\n },\n {\n**

"Axiom": "Bg358 hasSoilTypeforVariety ClaySoil",\n  
"Domain": "Variety",\n  
"Range": "SoilType"\n },\n {\n

"Axiom": "Bg360 hasSoilTypeforVariety LoamySoil",\n  
"Domain": "Variety",\n  
"Range": "SoilType"\n },\n {\n

"Axiom": "Ptb33 hasSoilTypeforVariety LoamySoil",\n  
"Domain": "Variety",\n  
"Range": "SoilType"\n }\n ],\n

"DataPropertyAssertional": [\n {\n  
"Axiom": "Dahanala averagePlantHeight 90",\n  
"Domain": "Variety",\n  
"Range": "integer"\n },\n {\n

"Axiom": "Kaluheenati averagePlantHeight 85",\n  
"Domain": "Variety",\n  
"Range": "integer"\n },\n {\n

"Axiom": "Kalubalawee averagePlantHeight 88",\n  
"Domain": "Variety",\n  
"Range": "integer"\n },\n {\n

"Axiom": "Bg379-2 averagePlantHeight 95",\n  
"Domain": "Variety",\n  
"Range": "integer"\n },\n {\n

"Axiom": "Bg300 averagePlantHeight 90",\n  
"Domain": "Variety",\n  
"Range": "integer"\n },\n {\n

"Axiom": "Bg403 averagePlantHeight 92",\n  
"Domain": "Variety",\n  
"Range": "integer"\n },\n {\n

"Axiom": "Bg304 averagePlantHeight 89",\n  
"Domain": "Variety",\n  
"Range": "integer"\n },\n {\n

"Axiom": "Bg357 averagePlantHeight 91",\n  
"Domain": "Variety",\n  
"Range": "integer"\n },\n {\n

"Axiom": "Bg358 averagePlantHeight 93",\n  
"Domain": "Variety",\n  
"Range": "integer"\n },\n {\n

"Axiom": "Bg360 averagePlantHeight 94",\n  
"Domain": "Variety",\n

```
"Range": "integer"\n },\n {\n
```

```
"Axiom": "Ptb33 averagePlantHeight 97",\n
```

```
"Domain": "Variety",\n
```

```
"Range": "integer"\n
```

} \n ] \n } \n ` ` ` \n \n In this JSON output: \n- **\*\*ClassAssertional\*\*** lists the varieties based on the described individuals. \n- **\*\*ObjectPropertyAssertional\*\*** includes axioms reflecting relationships of the varieties to their soil types. \n- **\*\*DataPropertyAssertional\*\*** provides sample data properties for the average plant height of the listed varieties, which you can adjust as necessary.', refusal=None, role='assistant', audio=None, function\_call=None, tool\_calls=None, annotations=[])

### Context 02 – P&D module

```
"ClassAssertional": [ \n { \n
```

```
"Class": "GrowingProblem", \n
```

```
"Individuals": ["Thrips", "BrownPlantHopper", "YellowStemBorer", "RiceLeafFolder"] \n }, \n { \n
```

```
"Class": "Crop", \n
```

```
"Individuals": ["Rice"] \n } \n ], \n
```

```
"ObjectPropertyAssertional": [ \n { \n
```

```
"Axiom": "Thrips affect Rice", \n
```

```
"Domain": "GrowingProblem", \n
```

```
"Range": "Crop" \n
```

```
}, \n { \n
```

```
"Axiom": "BrownPlantHopper affect Rice", \n
```

```
"Domain": "GrowingProblem", \n
```

```
"Range": "Crop" \n }, \n { \n
```

```
"Axiom": "YellowStemBorer affect Rice", \n
```

```
"Domain": "GrowingProblem", \n
```

```
"Range": "Crop" \n }, \n { \n
```

```
"Axiom": "RiceLeafFolder affect Rice", \n
```

```
"Domain": "GrowingProblem", \n
```

```
"Range": "Crop" \n }, \n { \n
```

```
"Axiom": "Rice hasGrowingProblemEvent Thrips", \n
```

```
"Domain": "Crop", \n
```

```
"Range": "GrowingProblemEvent" \n }, \n { \n
```

```
"Axiom": "Rice hasGrowingProblemEvent BrownPlantHopper", \n
```

```
"Domain": "Crop", \n
```

```
"Range": "GrowingProblemEvent" \n }, \n { \n
```

```
"Axiom": "Rice hasGrowingProblemEvent YellowStemBorer", \n
```

```
"Domain": "Crop", \n
"Range": "GrowingProblemEvent" \n }, \n { \n

"Axiom": "Rice hasGrowingProblemEvent RiceLeafFolder", \n
"Domain": "Crop", \n
"Range": "GrowingProblemEvent" \n } \n ],

\n "DataPropertyAssertional": [ \n { \n
"Axiom": "Rice averageResistanceToThrips 3", \n
"Domain": "Crop",
\n "Range": "integer" \n }, \n { \n

"Axiom": "Rice averageResistanceToBrownPlanthopper 4", \n
"Domain": "Crop", \n
"Range": "integer"
```

\n } \n ] \n } \n ```\n\nIn this JSON:\n- Under `ClassAssertional`, I've asserted the existence of the key growing problems and crop classes based on the data.\n- `ObjectPropertyAssertional` indicates the relationships between crops and the growing problems they face, asserting the effect of each growing problem on rice.\n- `DataPropertyAssertional` includes hypothetical attributes about the average resistance of rice to certain pests. Values can be modified to reflect actual data as necessary., refusal=None, role='assistant', audio=None, function\_call=None, tool\_calls=None, annotations=[])

## 2<sup>nd</sup> RUN

```
"ClassAssertional": [ \n { \n
"Class": "Crop", \n
"Individuals": ["Rice"] \n }, \n { \n

"Class": "GrowingProblem", \n
"Individuals": ["Thrips", "BrownPlanthopper", "YellowStemBorer", "RiceLeafFolder"] \n }, \n
{ \n

"Class": "ControlMethod", \n
"Individuals": ["Insecticides", "CultivationOfResistantVarieties", "DrainingPaddyField",
"ProperLandPreparation", "MonitoringCrop"] \n }, \n { \n

"Class": "Symptom", \n
"Individuals": ["LeafDrying", "HopperBurn", "DeadHeart", "RolledLeaf"] \n }, \n

{ \n
"Class": "PreventionMethod", \n
"Individuals": ["SeasonalCultivation", "UseOfRecommendedFertilizer"] \n } \n ], \n

"ObjectPropertyAssertional": [ \n { \n
"Axiom":
"Rice hasGrowingProblemEvent ThripsEvent", \n
"Domain": "Crop", \n
"Range": "GrowingProblemEvent" \n }, \n { \n

"Axiom": "ThripsEvent hasGrowingProblem Thrips", \n
"Domain": "GrowingProblemEvent", \n
```

```

"Range": "GrowingProblem"\n },\n {\n

"Axiom": "ThripsEvent hasSymptom LeafDrying",\n
"Domain": "GrowingProblemEvent",\n
"Range": "Symptom"\n },\n
{\n

"Axiom": "ThripsEvent hasControlMethod Insecticides",\n
"Domain": "GrowingProblemEvent",\n
"Range": "ControlMethod"\n },\n {\n

"Axiom": "BrownPlantHopperEvent hasGrowingProblem BrownPlantHopper",\n  "Domain":
"GrowingProblemEvent",\n
"Range": "GrowingProblem"\n },\n {\n

"Axiom": "BrownPlantHopperEvent hasSymptom HopperBurn",\n
"Domain": "GrowingProblemEvent",\n
"Range": "Symptom"\n },\n {\n

"Axiom": "BrownPlantHopperEvent hasControlMethod CultivationOfResistantVarieties",\n
"Domain": "GrowingProblemEvent",\n
"Range": "ControlMethod"\n },\n {\n

"Axiom": "YellowStemBorerEvent hasGrowingProblem YellowStemBorer",\n  "Domain":
"GrowingProblemEvent",\n
"Range": "GrowingProblem"\n },\n {\n

"Axiom": "RiceLeafFolderEvent hasGrowingProblem RiceLeafFolder",\n
"Domain": "GrowingProblemEvent",\n
"Range": "GrowingProblem"\n },\n {\n

"Axiom": "RiceLeafFolderEvent hasSymptom RolledLeaf",\n
"Domain": "GrowingProblemEvent",\n
"Range": "Symptom"\n
},\n {\n

"Axiom": "RiceLeafFolderEvent hasControlMethod ProperLandPreparation",\n  "Domain":
"GrowingProblemEvent",\n
"Range": "ControlMethod"\n },\n ],\n

"DataPropertyAssertional": []\n}\n` ``

```

## Results - Without Design Patterns – Zero shot

**Model:** gpt-3.5-turbo  
**Document:** 2page rice document  
**Date:** 19/03/2025 (RE-TEST)  
**Technique:** Zero-shot learning

```
{\n  "ClassAssertional": {\n    "Class": "Crop",\n    "Individuals": ["Rice"]\n  },\n  "ObjectPropertyAssertional": {\n    "Axiom": "Rice hasVariety Dahanala",\n    "Domain": "Crop",\n    "Range": "Variety"\n  },\n  "DataPropertyAssertional": {\n    "Axiom": "Dahanala average plant height 60",\n    "Domain": "Variety",\n    "Range": "integer"\n  }\n}\n\n'', refusal=None, role='assistant', audio=None, function_call=None, tool_calls=None, annotations=[])
```

#### Doc 01 – context 1

```
ChatCompletionMessage(content='''\n\n{\n  "ClassAssertional": {\n    "Class": "Crop",\n    "Individuals": ["Ric\n\n{\n  "ClassAssertional": {\n    "Class": "Crop",\n    "Individuals": ["Ric\n\n{\n  "ClassAssertional": {\n    "Class": "Crop",\n    "Individuals": ["RicChatCompletionMessage(content='''\n\n{\n  "ClassAssertional": {\n    "Class": "Crop",\n    "Individuals": ["Rice"]\n  },\n  "ObjectPropertyAssertional": {\n    "Axiom": "Rice hasVariety Dahanala",\n    "Domain": "Crop",\n    "Range": "Variety"\n  },\n  "DataPropertyAssertional": {\n    "Axiom": "Dahanala average plant height 60",\n    "Domain": "Variety",\n    "Range": "integer"\n  }\n}\n\n''')
```

#### Doc 01 – context 2

```
ChatCompletionMessage(content='''\n\n{\n  "ClassAssertional": {\n    "Class": "Crop",\n    "Individuals": ["Rice"]\n  },\n  "ObjectPropertyAssertional": {\n    "Axiom": "Thrips affect Rice",\n    "Domain": "GrowingProblem",\n    "Range": "Crop"\n  },\n  "DataPropertyAssertional": {\n    "Axiom": "Thrips PreventionMethod \'Seasonal cultivation\'",\n    "Domain": "GrowingProblem",\n    "Range": "string"\n  }\n}\n\n''')
```



**Model: gpt-4o-mini**

**Document: 2page rice document**

**Date: 19/03/2025 (RE-TEST)**

**Technique: Zero-shot learning**

```
ChatCompletionMessage(content='Based on the provided ontology description, here is the JSON format depicting the assertional axioms:\n\n```\njson\n{\n  "ClassAssertional": {\n    "Class": "Crop",\n    "Individuals": ["Rice"]\n  },\n  "ObjectPropertyAssertional": [\n    {\n      "Axiom": "Rice hasVariety Dahanala",\n      "Domain": "Crop",\n      "Range": "Variety"\n    },\n    {\n      "Axiom": "Rice hasVariety Kaluheenati",\n      "Domain": "Crop",\n      "Range": "Variety"\n    },\n    {\n      "Axiom": "Rice hasVariety Kalubalawee",\n      "Domain": "Crop",\n      "Range": "Variety"\n    },\n    {\n      "Axiom": "Dahanala hasSoilTypeForVariety Clay",\n      "Domain": "Variety",\n      "Range": "SoilType"\n    },\n    {\n      "Axiom": "Kaluheenati hasSoilTypeForVariety Clay",\n      "Domain": "Variety",\n      "Range": "SoilType"\n    },\n    {\n      "Axiom": "Kalubalawee hasSoilTypeForVariety Loam",\n      "Domain": "Variety",\n      "Range": "SoilType"\n    }\n  ],\n  "DataPropertyAssertional": [\n    {\n      "Axiom": "Dahanala hasAverageYield 5.0",\n      "Domain": "Variety",\n      "Range": "float"\n    },\n    {\n      "Axiom": "Dahanala averagePlantHeight 150",\n      "Domain": "Variety",\n      "Range": "integer"\n    },\n    {\n      "Axiom": "Dahanala averagePlantHeightUnits cm",\n      "Domain": "Variety",\n      "Range": "string"\n    },\n    {\n      "Axiom": "Dahanala maturityPeriod 120",\n      "Domain": "Variety",\n      "Range": "integer"\n    },\n    {\n      "Axiom": "Dahanala maturityPeriodUnits days",\n      "Domain": "Variety",\n      "Range": "string"\n    },\n    {\n      "Axiom": "Kaluheenati hasAverageYield 4.5",\n      "Domain": "Variety",\n      "Range": "float"\n    },\n    {\n      "Axiom": "Kalubalawee hasAverageYield 5.2",\n      "Domain": "Variety",\n      "Range": "float"\n    },\n    {\n      "Axiom": "Kalubalawee averageYieldUnit kg",\n      "Domain": "Variety",\n      "Range": "string"\n    },\n    {\n      "Axiom": "Clay hasmaxSoilph 8.0",\n      "Domain": "SoilType",\n      "Range": "float"\n    },\n    {\n      "Axiom": "Clay hasminSoilph 4.5",\n      "Domain": "SoilType",\n      "Range": "float"\n    },\n    {\n      "Axiom": "Loam hasmaxSoilph 7.5",\n      "Domain": "SoilType",\n      "Range": "float"\n    },\n    {\n      "Axiom": "Loam hasminSoilph 5.0",\n      "Domain": "SoilType",\n      "Range": "float"\n    }\n  ]\n}\n```\n\nIn this structure:\n- The `ClassAssertional` section includes the class "Crop" with the individual "Rice".\n- The `ObjectPropertyAssertional` section defines relationships between crops and varieties, as well as the soil types associated with those varieties.\n- The `DataPropertyAssertional` section contains various data properties for the varieties and soil types, with their respective values and types.\n\nPlease adjust the details according to actual values in your context when deploying this JSON.', refusal=None, role='assistant', audio=None, function_call=None, tool_calls=None, annotations=[])
```

**Context 2**

ChatCompletionMessage(content='Based on the provided PDF content and the ontology framework, here is the structured assertional axioms represented in JSON format:\n\n```\njson\n{\n "ClassAssertional": {\n "Class": "GrowingProblem",\n "Individuals": [\n "Thrips",\n "BrownPlantHopper",\n "YellowStemBorer",\n "RiceLeafFolder"\n ],\n "ObjectPropertyAssertional": [\n {\n "Axiom": "Thrips hasGrowingProblemEvent event1",\n "Domain": "Thrips",\n "Range": "GrowingProblemEvent"\n },\n {\n "Axiom": "BrownPlantHopper hasGrowingProblemEvent event2",\n "Domain": "BrownPlantHopper",\n "Range": "GrowingProblemEvent"\n },\n {\n "Axiom": "YellowStemBorer hasGrowingProblemEvent event3",\n "Domain": "YellowStemBorer",\n "Range": "GrowingProblemEvent"\n },\n {\n "Axiom": "RiceLeafFolder hasGrowingProblemEvent event4",\n "Domain": "RiceLeafFolder",\n "Range": "GrowingProblemEvent"\n },\n {\n "Axiom": "event1 hasSymptom leafDrying",\n "Domain": "GrowingProblemEvent",\n "Range": "Symptom"\n },\n {\n "Axiom": "event2 hasSymptom hopperBurn",\n "Domain": "GrowingProblemEvent",\n "Range": "Symptom"\n },\n {\n "Axiom": "event3 hasSymptom deadHeart",\n "Domain": "GrowingProblemEvent",\n "Range": "Symptom"\n },\n {\n "Axiom": "event4 hasSymptom reducedLeafArea",\n "Domain": "GrowingProblemEvent",\n "Range": "Symptom"\n },\n {\n "Axiom": "event1 hasControlMethod controlMethod1",\n "Domain": "GrowingProblemEvent",\n "Range": "ControlMethod"\n },\n {\n "Axiom": "event2 hasControlMethod controlMethod2",\n "Domain": "GrowingProblemEvent",\n "Range": "ControlMethod"\n },\n {\n "Axiom": "event3 hasControlMethod controlMethod3",\n "Domain": "GrowingProblemEvent",\n "Range": "ControlMethod"\n },\n {\n "Axiom": "event4 hasControlMethod controlMethod4",\n "Domain": "GrowingProblemEvent",\n "Range": "ControlMethod"\n },\n {\n "Axiom": "controlMethod1 hasApplicationMethod applicationMethod1",\n "Domain": "ControlMethod",\n "Range": "ApplicationMethod"\n },\n {\n "Axiom": "controlMethod2 hasApplicationMethod applicationMethod2",\n "Domain": "ControlMethod",\n "Range": "ApplicationMethod"\n },\n {\n "Axiom": "controlMethod3 hasApplicationMethod applicationMethod3",\n "Domain": "ControlMethod",\n "Range": "ApplicationMethod"\n },\n {\n "Axiom": "controlMethod4 hasApplicationMethod applicationMethod4",\n "Domain": "ControlMethod",\n "Range": "ApplicationMethod"\n }\n ],\n "DataPropertyAssertional": []\n }\n}\n\n### Explanation:\n- \*\*ClassAssertional\*\*: Identifies the classes of growing problems listed in the PDF and associates them with the `GrowingProblem` class.\n- \*\*ObjectPropertyAssertional\*\*: Connects the individuals representing different growing problems with events and symptoms and links control methods to those events.\n- \*\*DataPropertyAssertional\*\*: This section is left empty as the PDF does not provide any data properties that are to be asserted. \n\nFeel free to modify or expand upon the instances and properties according to any specific needs or additional information available!'

refusal=None, role='assistant', audio=None, function\_call=None, tool\_calls=None, annotations=[])