Introduction

Chapter 11

Understanding and Learning

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On the Instruction of Story
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11.2.3 Hypothesis Verification

The reasoning hypothesis is then tested for degree of fit or acceptability. To verify the hypothesis, the system generates a new explanation pattern, and the reader has to complete the explanation. The reader's suspicion, if any, is resolved. If the hypothesis is not resolved, the system generates another hypothesis and this process is repeated. This cycle continues until the hypothesis is resolved.

Example 11.9

A new explanation pattern is generated and is presented to the reader. The reader is asked to verify the hypothesis by providing a new explanation pattern. The reader's verification is accepted if the new explanation pattern is consistent with the hypothesis.

11.2.3.1 Explanation generation

The explanation generation process attempts to resolve the anomaly by constructing a causal account. The process consists of the following steps:

1. **Anomaly detection**: The anomaly is detected by comparing the observed data with the expected data. If the difference between the observed and expected data is significant, the anomaly is detected.

2. **Anomaly characterization**: The anomaly is characterized by identifying the cause and effect relationships. The cause and effect relationships are identified by analyzing the data and the system's knowledge base.

3. **Anomaly verification**: The anomaly is verified by comparing the predicted output with the observed output. If the predicted output is consistent with the observed output, the anomaly is verified.

Example 11.10

The system generates a new explanation pattern and presents it to the reader. The reader is asked to verify the explanation pattern by providing a new explanation pattern. The reader's verification is accepted if the new explanation pattern is consistent with the anomaly.

11.2.3.2 Explanation evaluation

The explanation evaluation process attempts to determine the validity of the explanation. The process consists of the following steps:

1. **Explanation selection**: The system selects the most appropriate explanation from the available explanations. The explanation is selected based on its relevance, accuracy, and completeness.

2. **Explanation verification**: The explanation is verified by comparing the predicted output with the observed output. If the predicted output is consistent with the observed output, the explanation is verified.

Example 11.11

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11.2.3.3 Explanation generation

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Example 11.12

The system generates a new explanation pattern and presents it to the reader. The reader is asked to verify the explanation pattern by providing a new explanation pattern. The reader's verification is accepted if the new explanation pattern is consistent with the anomaly.

11.2.3.4 Explanation evaluation

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1. **Explanation selection**: The system selects the most appropriate explanation from the available explanations. The explanation is selected based on its relevance, accuracy, and completeness.

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Example 11.13

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Performance Framework: 

11.1 Process Model of Learning

In order to improve the cognitive performance, the learner needs to be in a model that allows them to acquire, practice, and test their skills. This model can be divided into three main stages: pretraining, training, and post-training.

11.1.1 Pretraining

The pretraining stage is the initial phase where the learner is introduced to the new material. This stage involves the presentation of the material in a way that is easy to understand and comprehend. The learner is encouraged to ask questions and seek clarification on any topics that they do not understand.

11.1.2 Training

The training stage is the core of the learning process. This stage involves the learner actively engaging with the material through practice and application. The learner is given opportunities to apply what they have learned in real-life situations.

11.1.3 Posttraining

The posttraining stage is the final phase where the learner reflects on their learning experience. This stage involves reviewing what they have learned and identifying areas for improvement. The learner is also encouraged to share their experience with others and to continue learning from the experience.
11.5 Comparison of Learning and Story Understanding

The concept of learning and story understanding should be the focus of our discussion. Learning methods can significantly impact how we analyze performance data. For example, a learner who performs well on comprehension tests might still struggle with story understanding. This discrepancy highlights the need to consider more diverse measures of performance. By examining learner engagement, we can gain insights into how different factors influence learning outcomes.