SQI:
Search-Query-Interpreter

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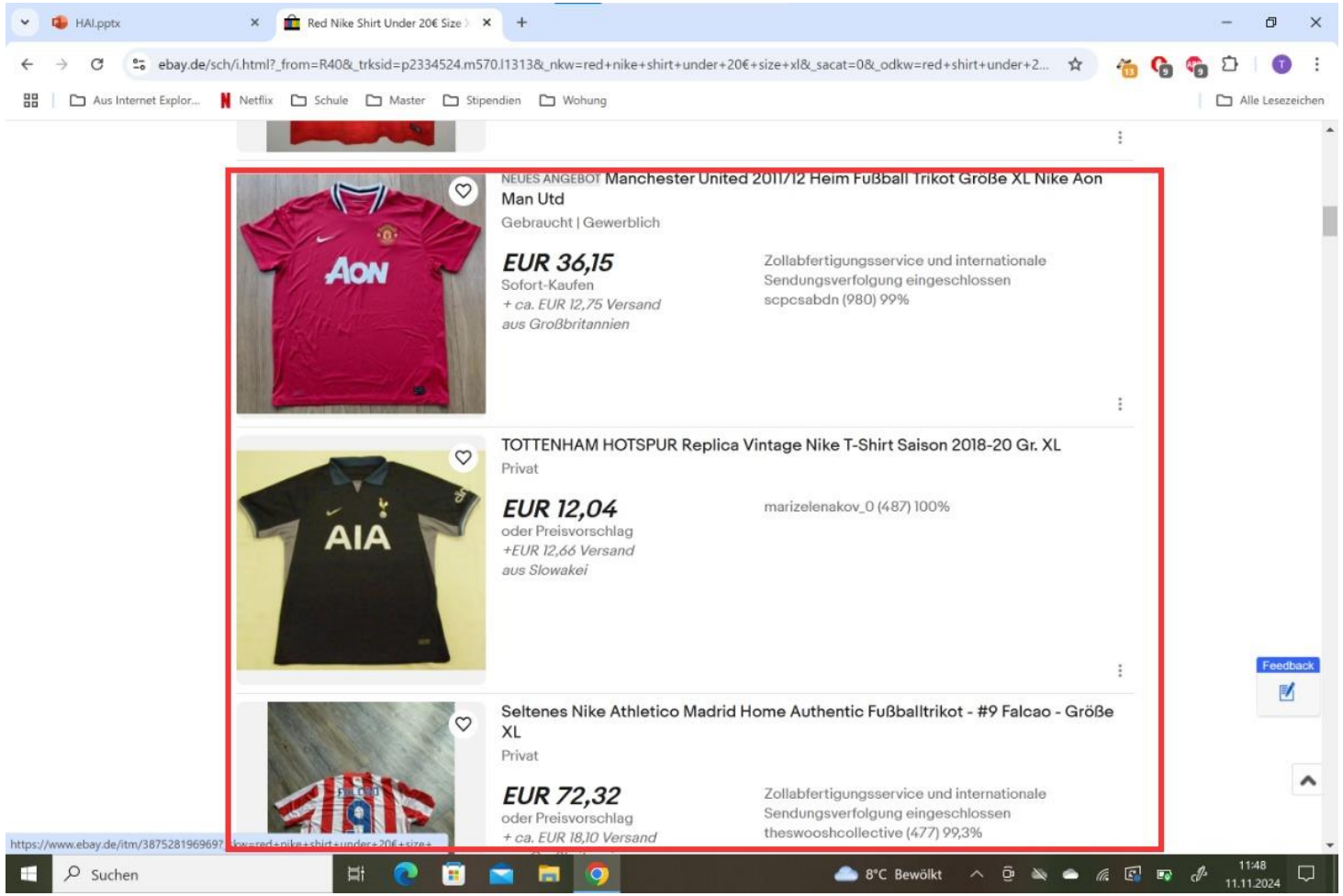
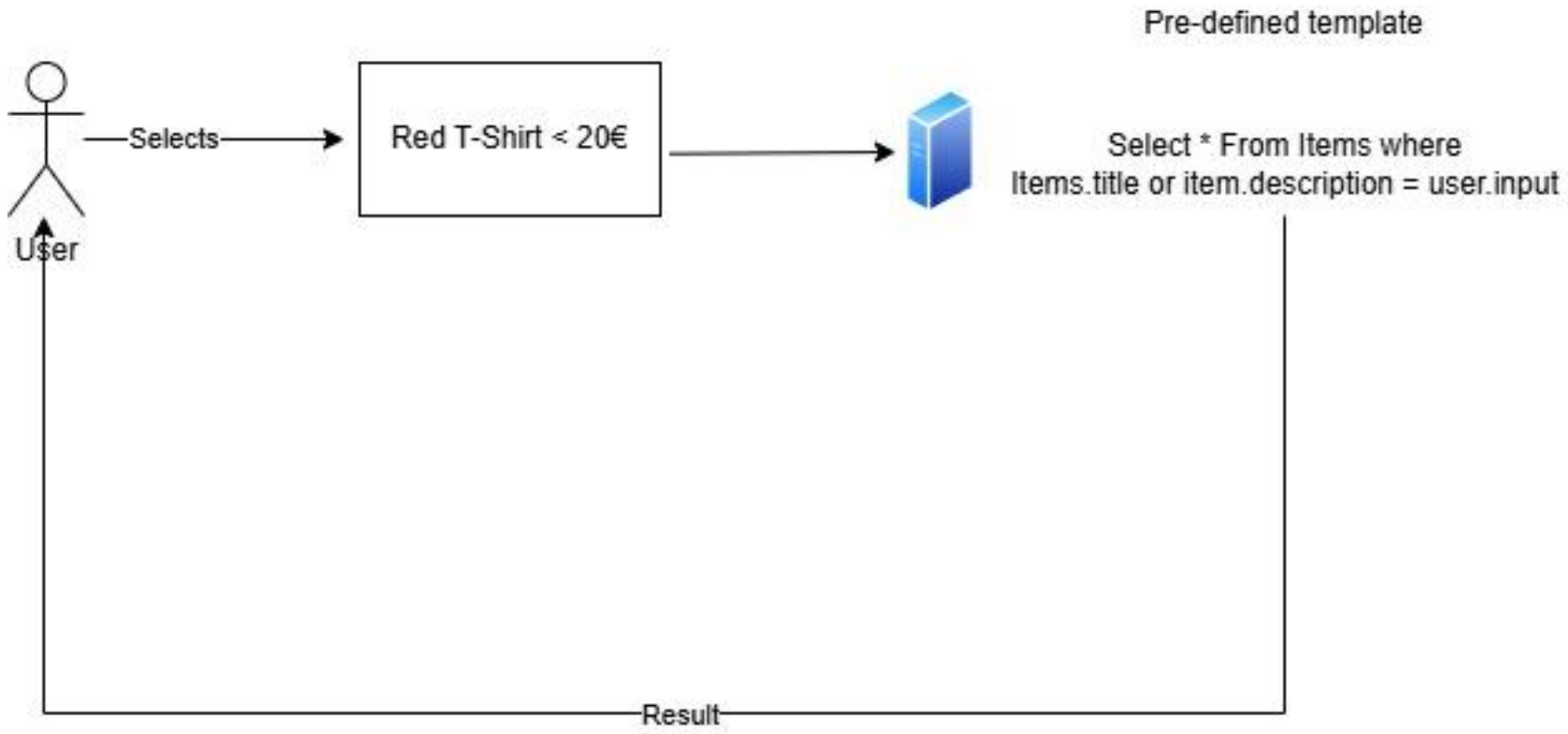
Problem

- Livedemo



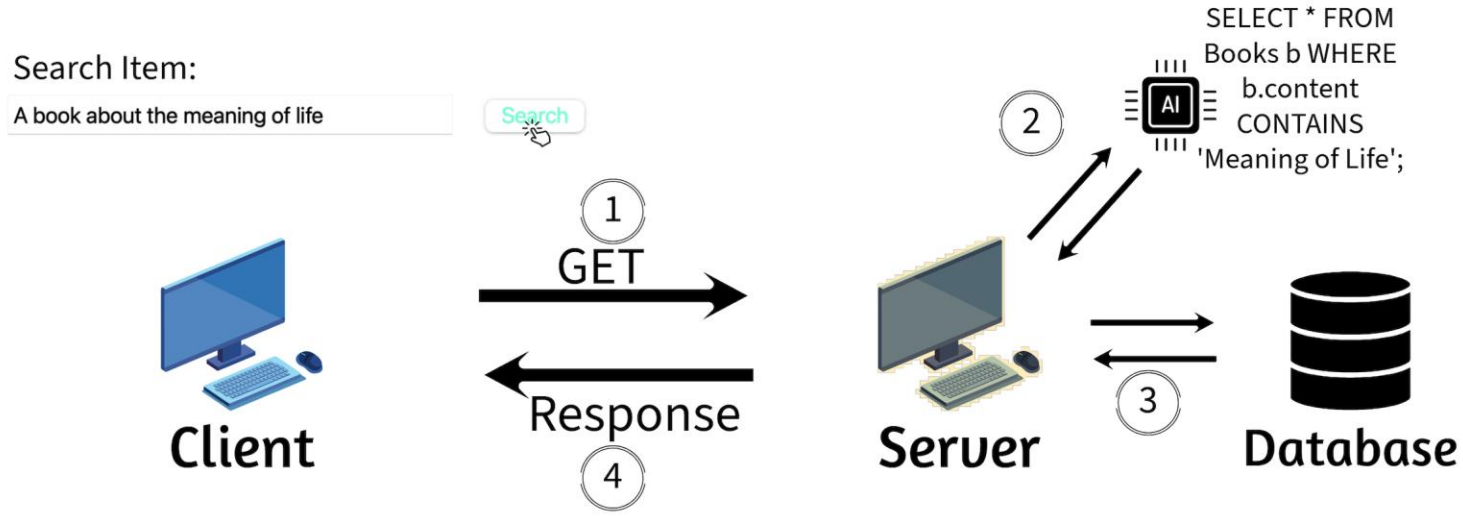
State of the Art

- User searches for a product
- Must use checkboxes to search specifically for products
- Pre-defined template



Idea

- 1: User enters an input only via the textbox
- 2: SQI outputs an sql query generated by an LLM
- 3: Use this query to filter correctly in the database
- 4: Display result to user



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- Applicable on real-world problems
- **Privacy preserving AI**
  - Nothing prevents the user from obtaining confidential information such as passwords, email addresses or other criteria
    - Like **SQL injections,** but even worse, because it can now be done by users with no knowledge of SQL at all
  - Never disclose confidential data
  - should not generate sql like the "select username, password from customer"

Spider dataset

- requires the model to generalise better
- various domains -> hence, the name "spider"
- beats WikiSQL or other SQL datasets
  - **More** databases
  - Covers a wider range of domains

Natural Language Meets Database:

System Transparency and User Understanding in NL-to-SQL Translation

Problem Statement

- Create SQL-queries dynamically with machine learning to replace conventional template systems
- Understanding user requirements and feedback
- Enhancing AI system effectiveness
- Improving overall user experience

https://arxiv.org/pdf/2308.15363

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Related Work

- Top performing Text-To-SQL: Alibaba Group

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Research Questions

- Characteristics of typical user natural language queries to SQL
- Common mismatches between user intent and SQL queries
- Adapt SQL queries to user intent
- Communicate system limitations to users
- Provide understandable privacy restriction feedback

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Expected Outcome

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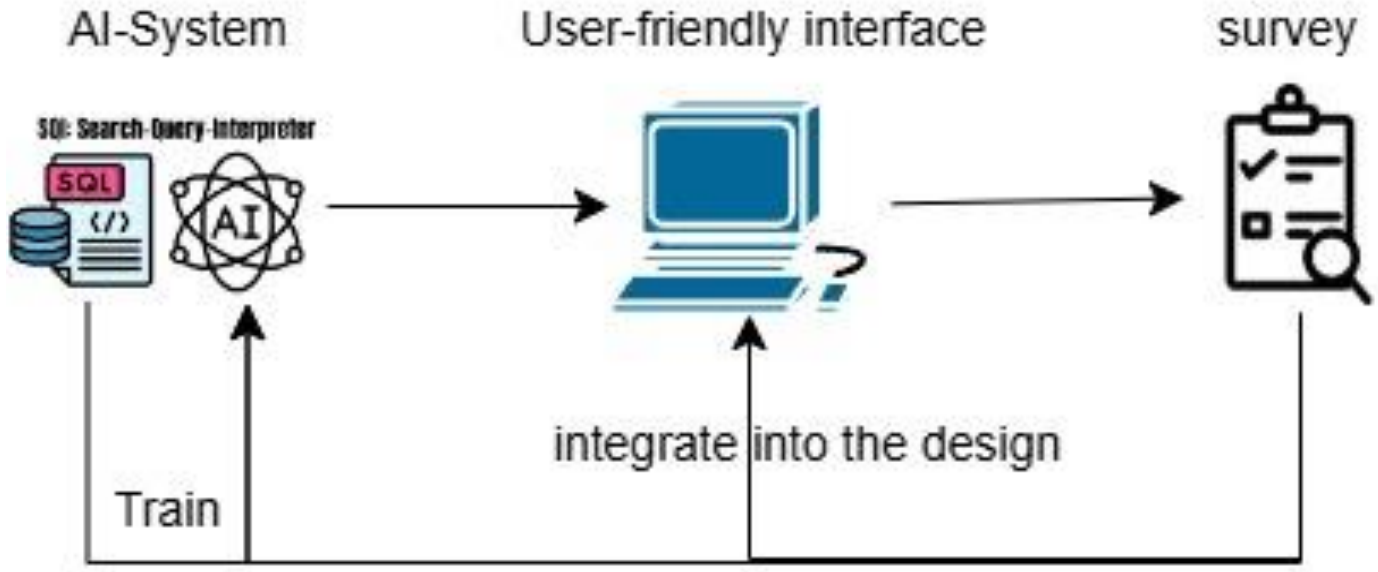
- **Methodology**



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Thank you
For your
Attention