Automate programming – EIAI

Engineered Information Systems with A.I.

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EIAI – Technology

• Automated *software synthesis* for a broad class of *Information Systems*
• Replaces *full-stack developers, programmers!*
• Based on A.I. technologies:
  • combinatorial search
  • logic-based knowledge representation
  • automated reasoning
• Addresses the global 200+ Billion information systems market
Target: Information Systems

- HTML/HTTP
- GTK+, Qt, ...
- email
- DBMS
- cloud storage
- external SW
Approach

moneyTransfer amount, account1, account2
balance of a1 \geq amount
user owns account1 OR user is bank clerk
increase balance of account2 by amount
decrease balance of account1 by amount

Specification includes:
abstract “laws” of the application
authorizations (view, modify, …)
UI customization (HTML5, CSS3)

• Derive database interfaces
• Derive user interfaces
• Derive functionality

by

• A.I. knowledge representation
• A.I. automated reasoning
• A.I. automated decision-making
Project Status

• Demonstrators developed and planned:
  • University information systems
  • Financial, accounting
  • ...

• Prototype being re-implemented
  • improve throughput (HTTP & DB interfaces)
  • code generation (Java, Python, ...)

• Partners sought!