

Breaking the Recursivity: Towards a Model to Analyse Expert Finders

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Outline

- 1 Expert Finders & Recursive Validation
- 2 Model of Expertise Evaluation
- 3 Analysis of Expert Finders
- 4 Summary & Future Works

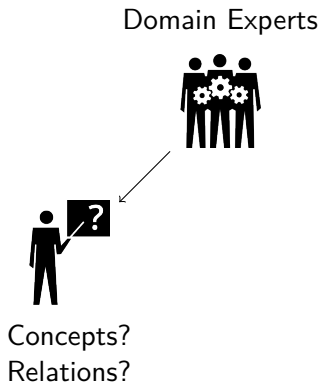
Expert Finding

Domain Experts



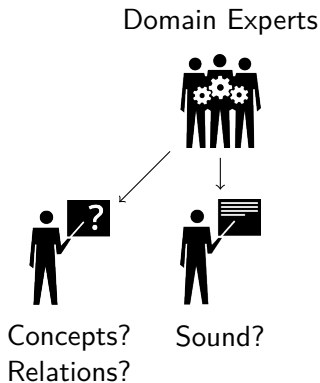
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Expert Finding



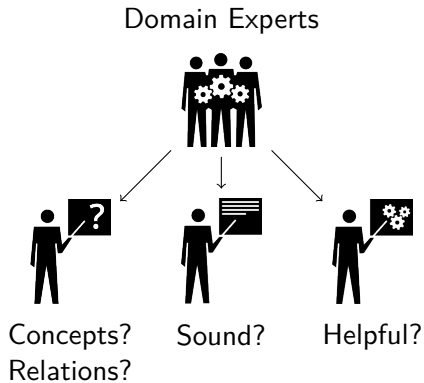
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Expert Finding



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Expert Finding



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Building Expert Finders

The usual way:

- 1 Intuition-based measures and techniques

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but not validated

What is wrong?

Recursivity

Validating an expert finder requires a validated expert finder.

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Validating an expert finder requires a validated expert finder.

In particular:

- gold standard → EF's job
- human evaluations & unused resources → not validated

What can we do?

Target design validation

Build a model which helps designing expert finders.

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Target design validation

Build a model which helps designing expert finders.

Break the recursivity:

- rely on a model → not queries + rankings
- built from expertise literature → grounded

Domain-Evaluator-Evaluation

DOMAIN

EVALUATOR

EVALUATION



Domain-Evaluator-Evaluation

DOMAIN

EVALUATOR

EVALUATION

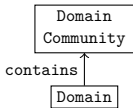
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Domain-Evaluator-Evaluation

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EVALUATOR

EVALUATION

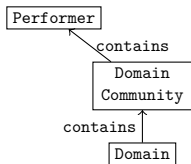


Domain-Evaluator-Evaluation

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EVALUATION

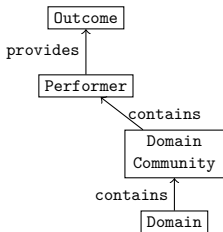


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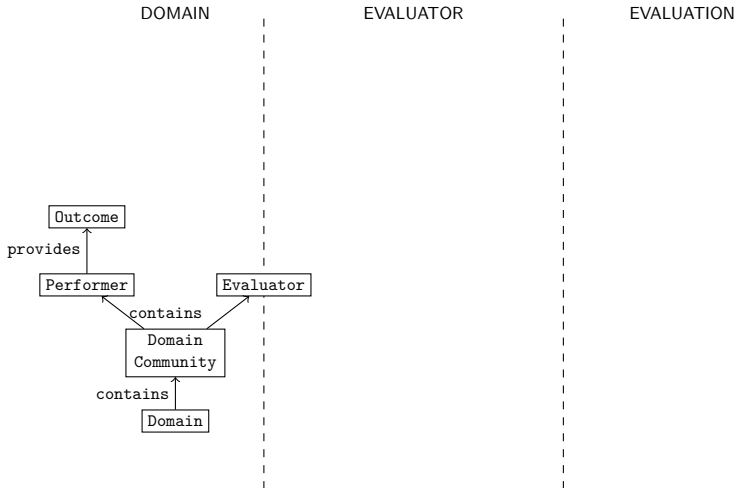
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EVALUATOR

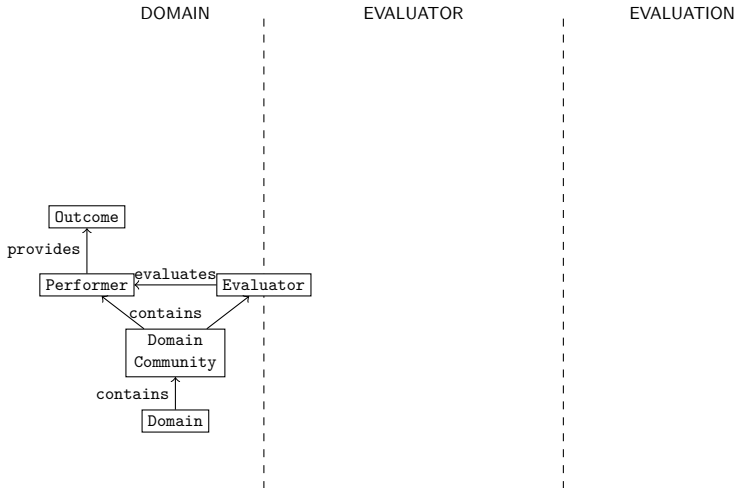
EVALUATION



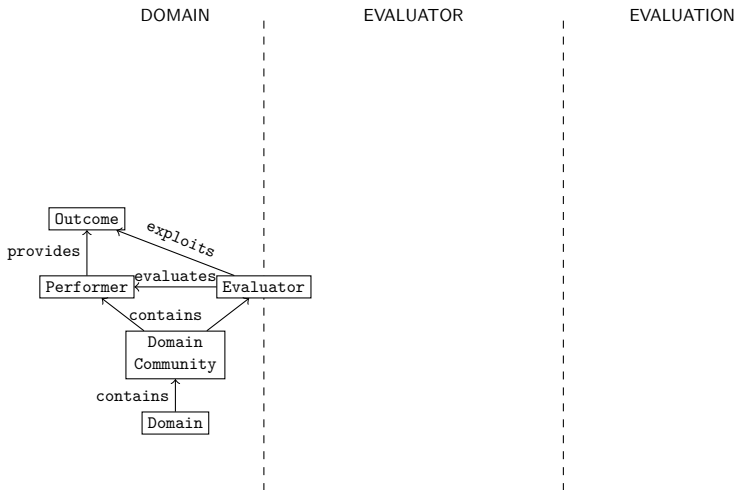
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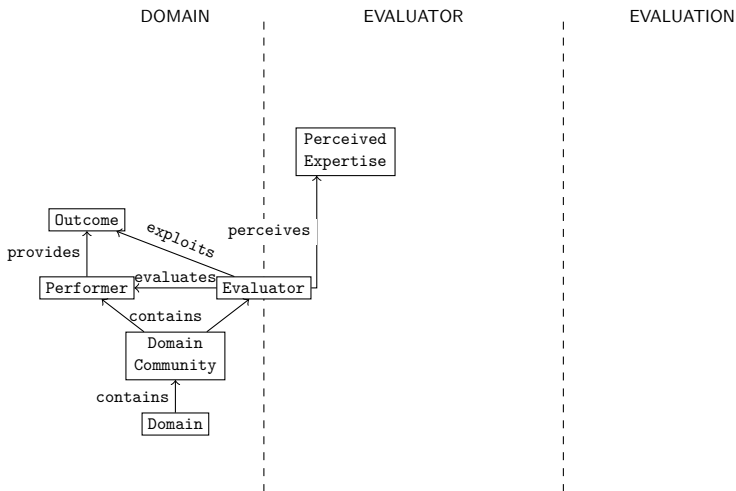
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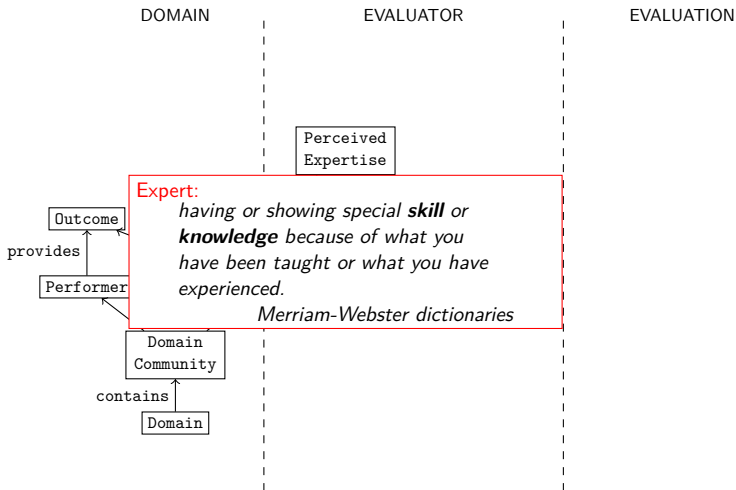
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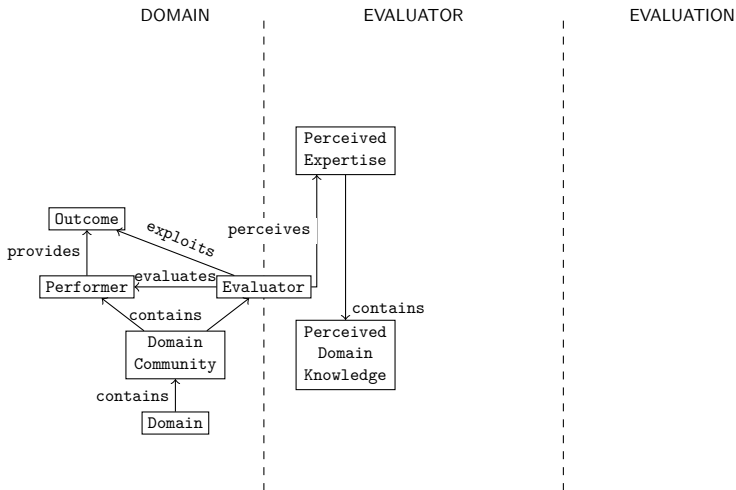
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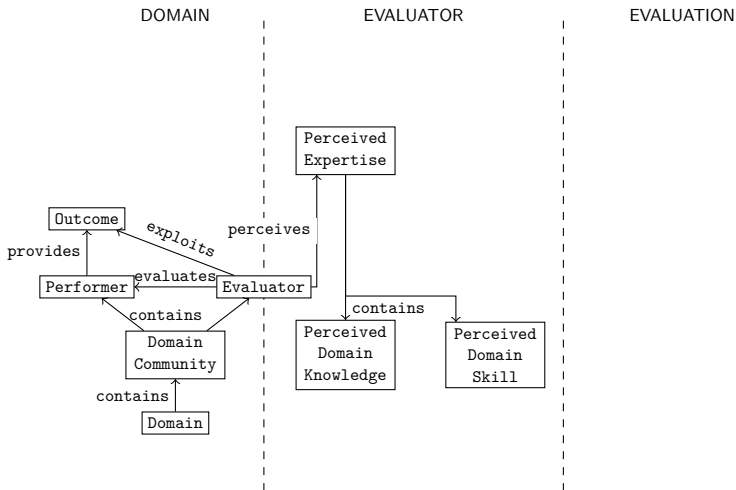
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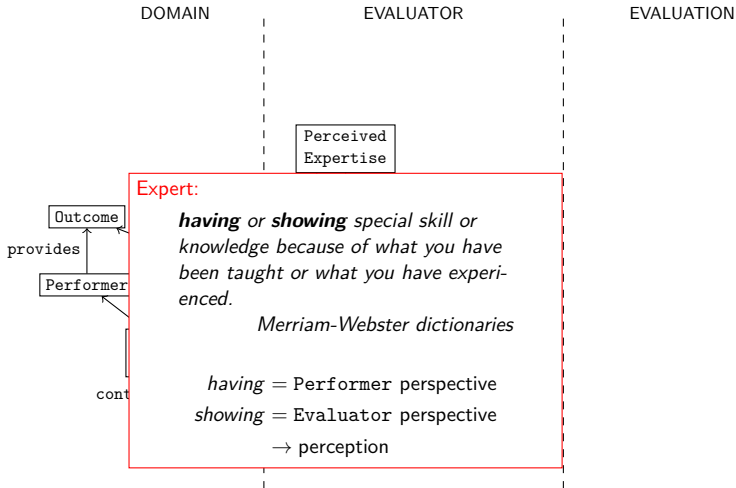
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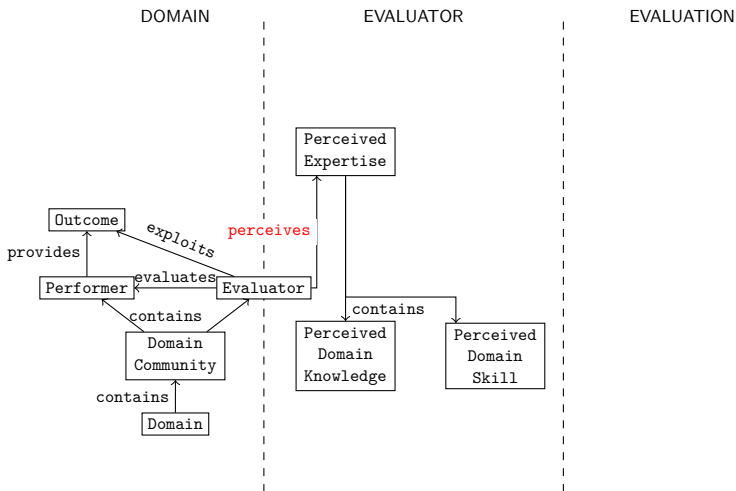
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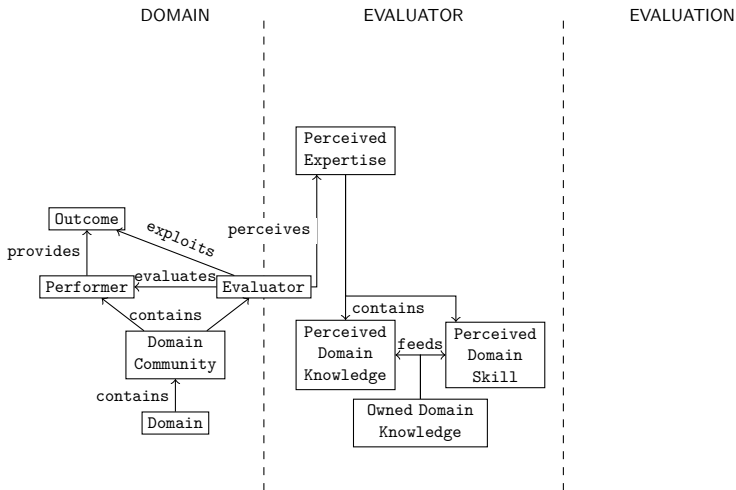
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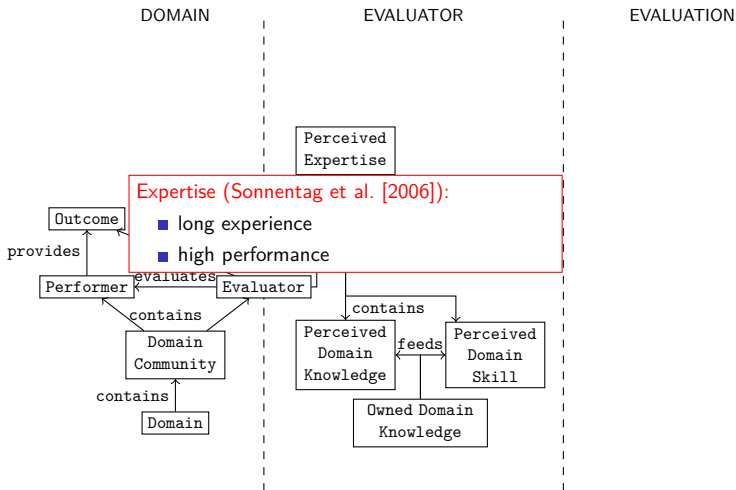
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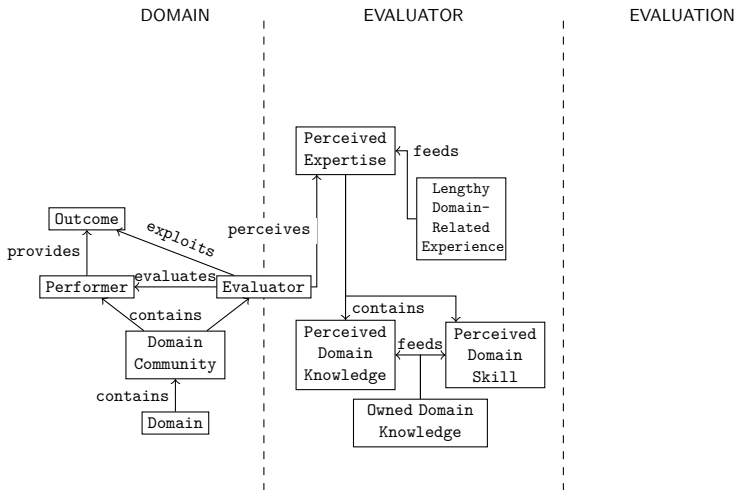
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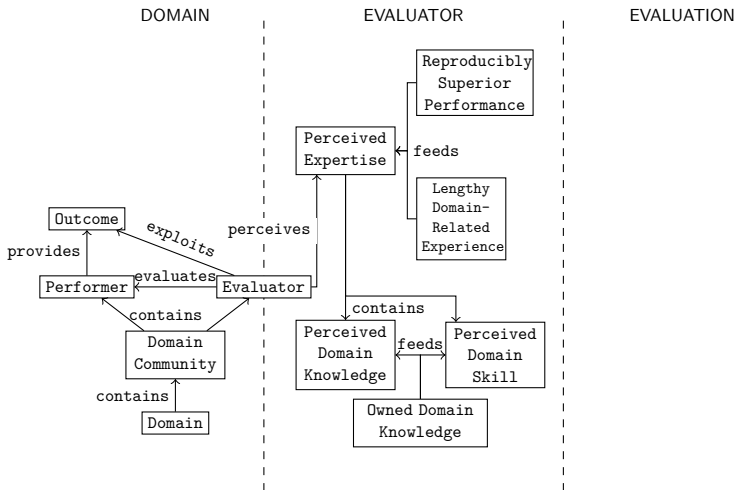
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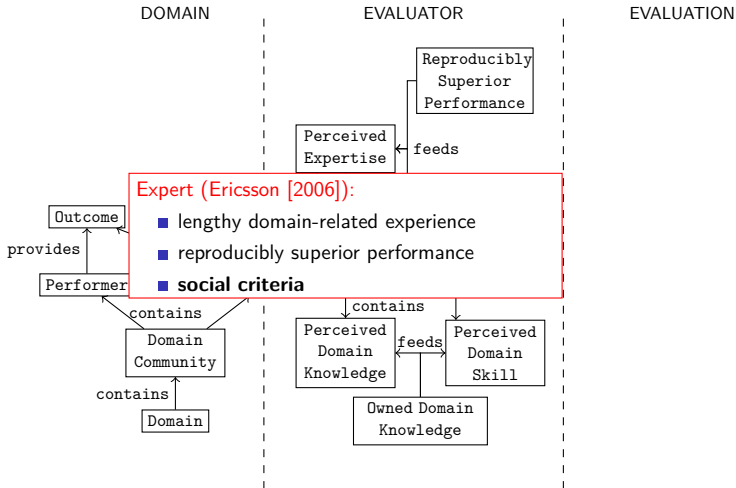
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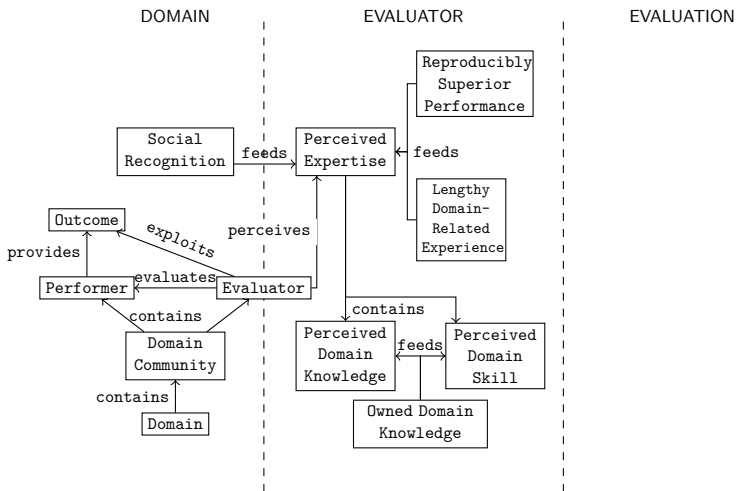
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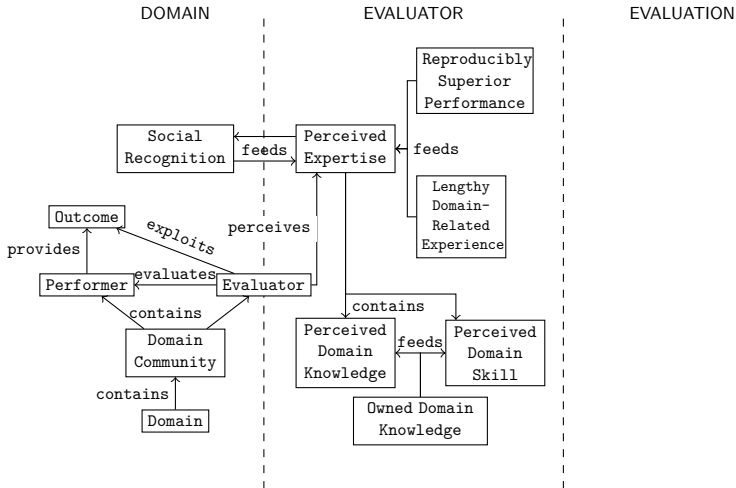
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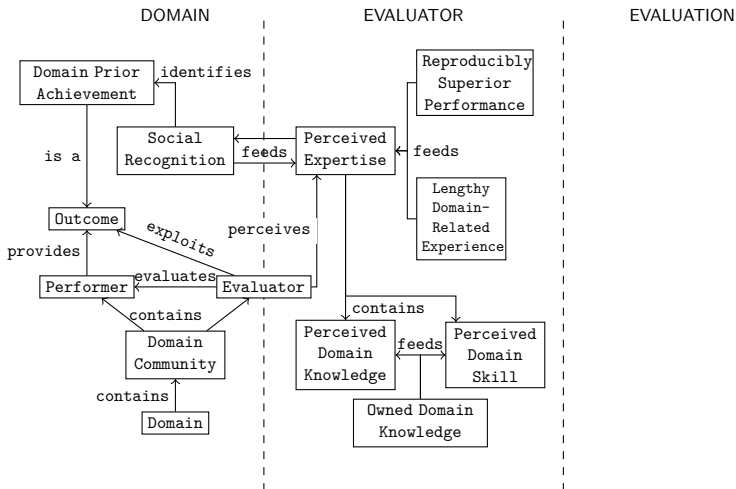
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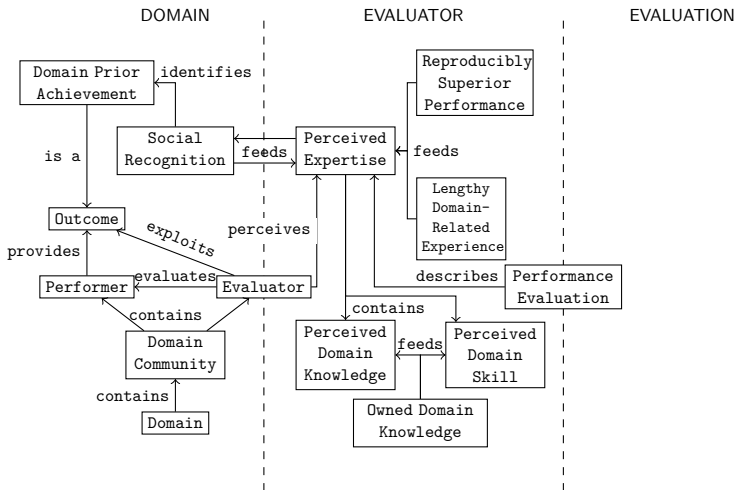
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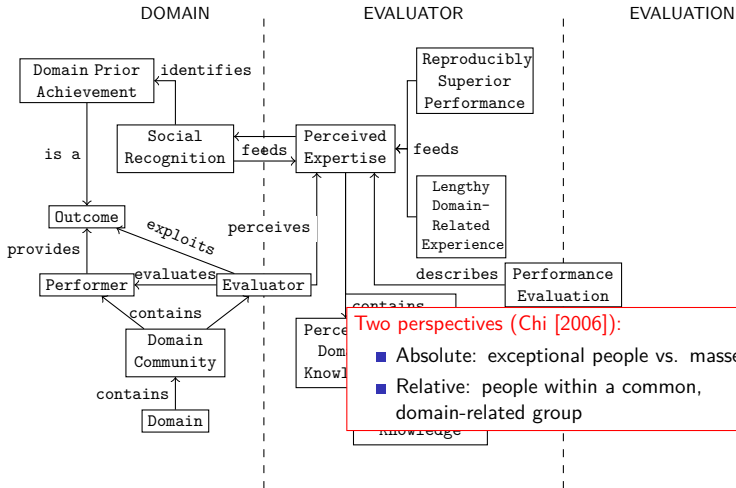
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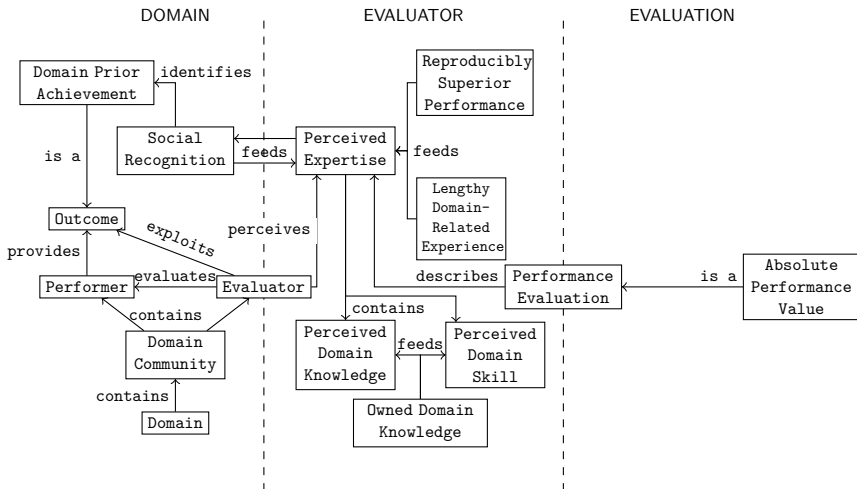
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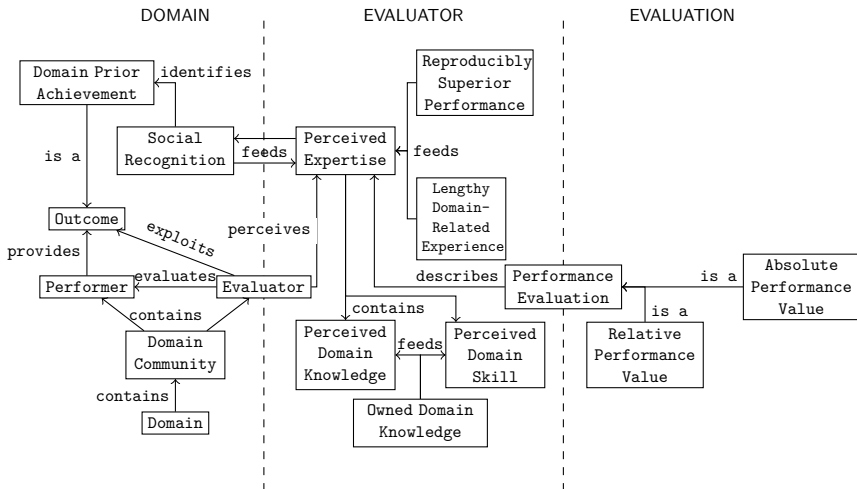
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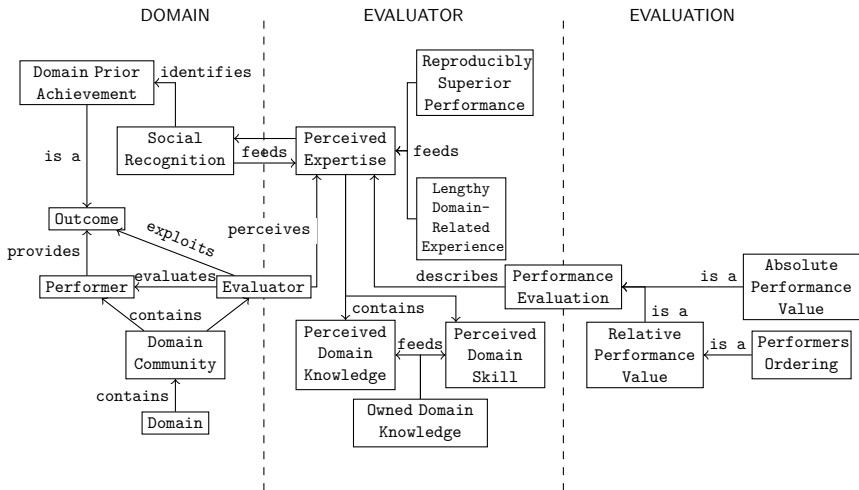
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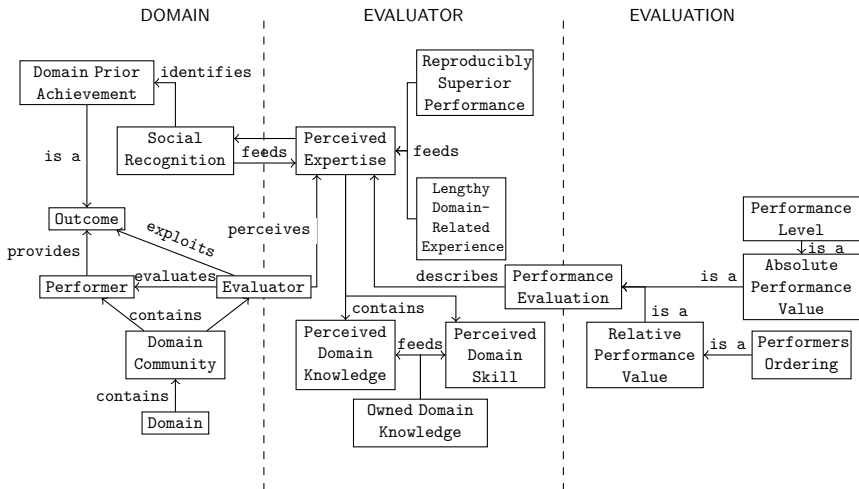
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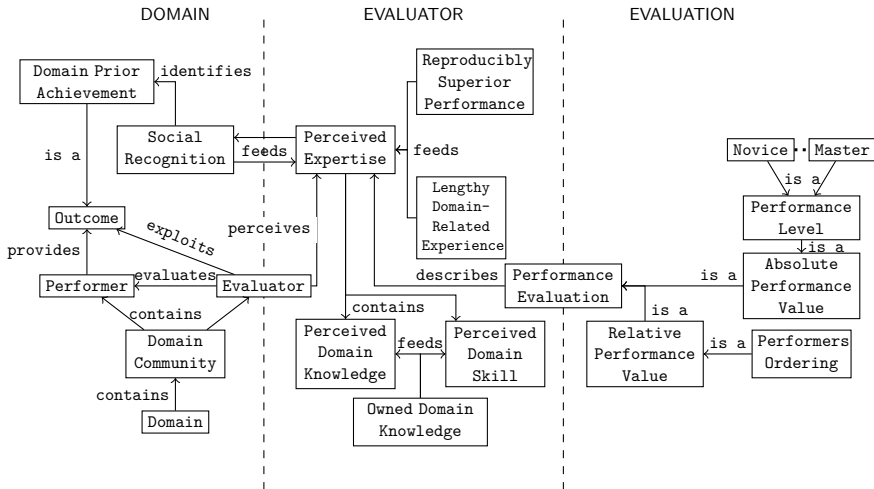
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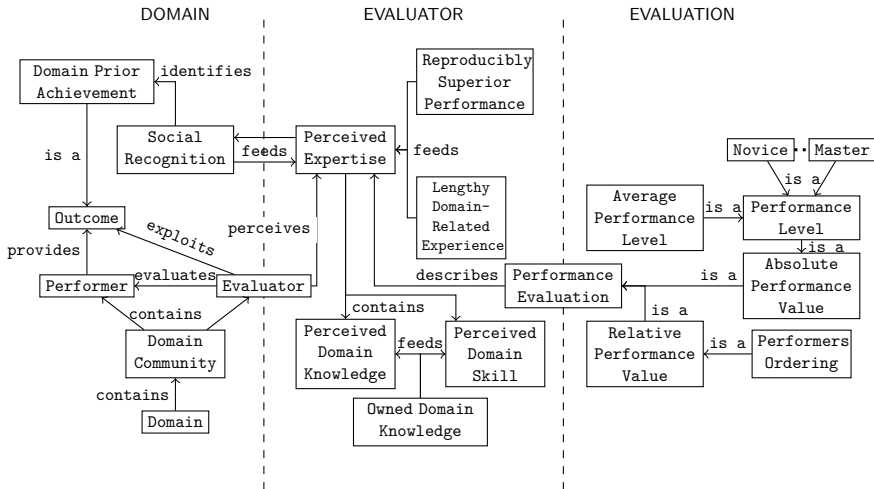
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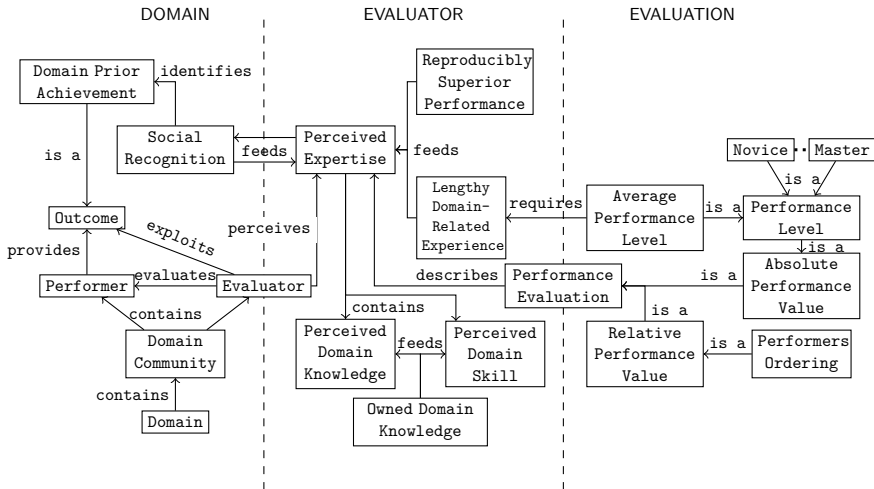
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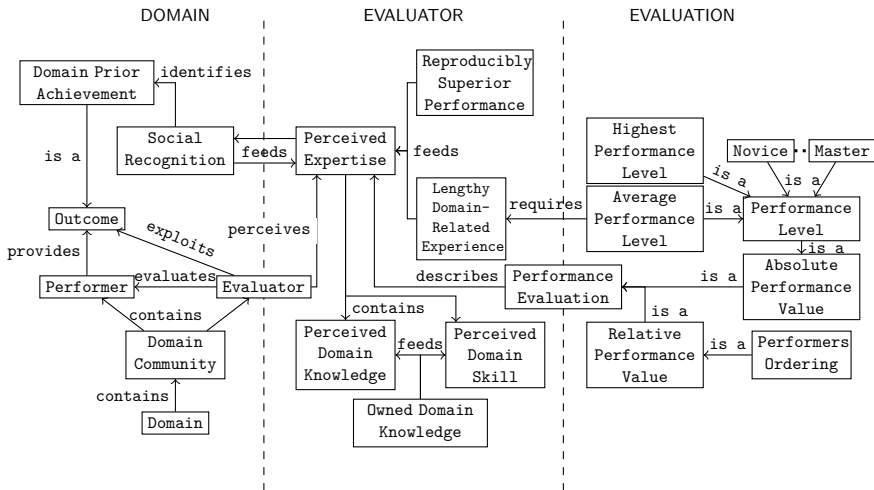
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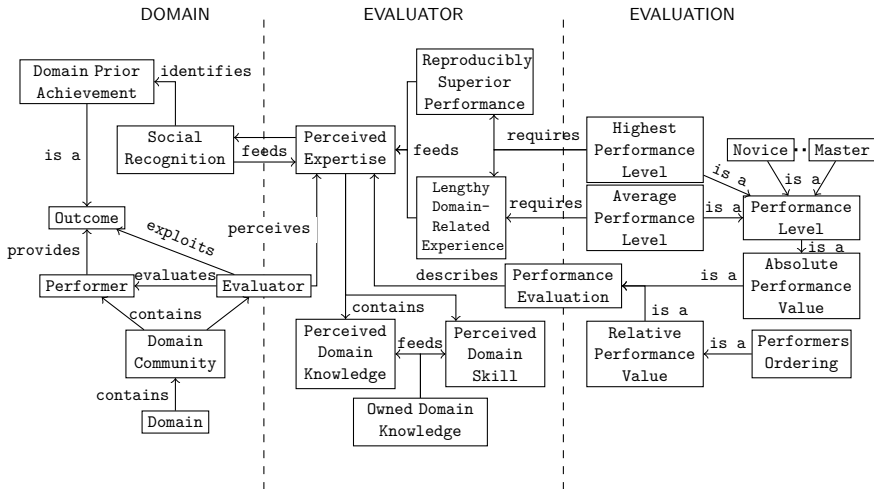
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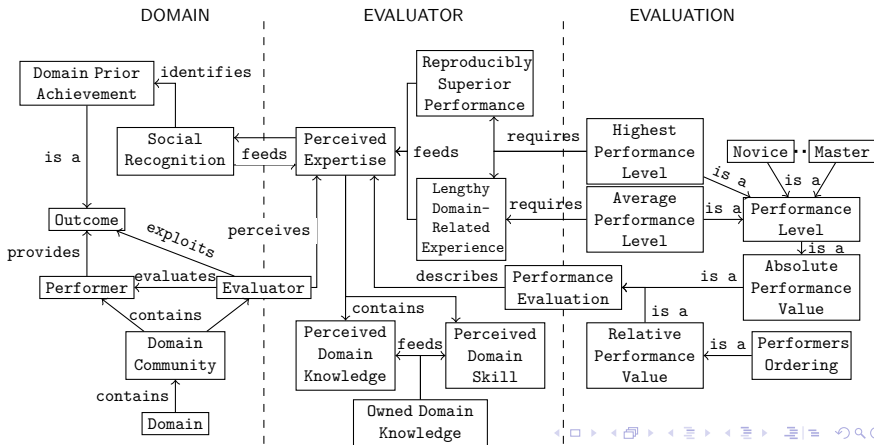


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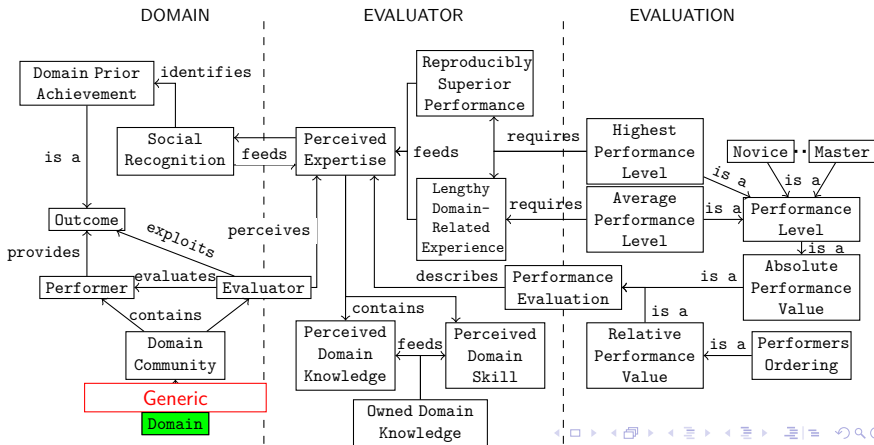
Karimzadehgan et al. [2009]

Rank employees of a company based on e-mails and hierarchy



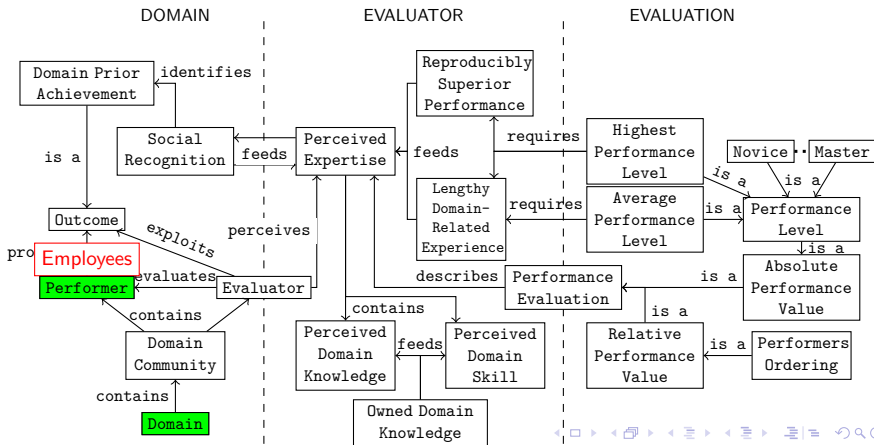
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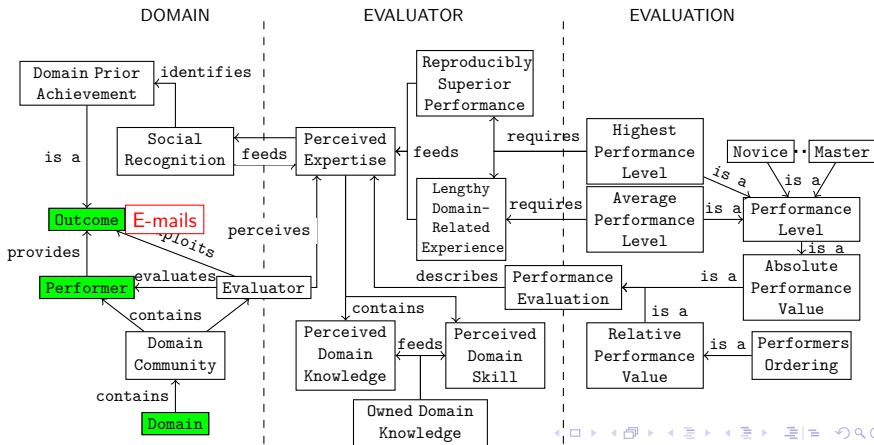
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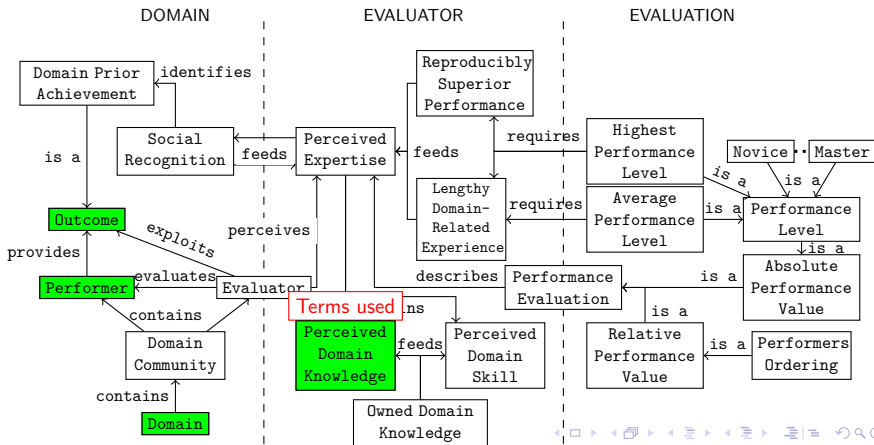
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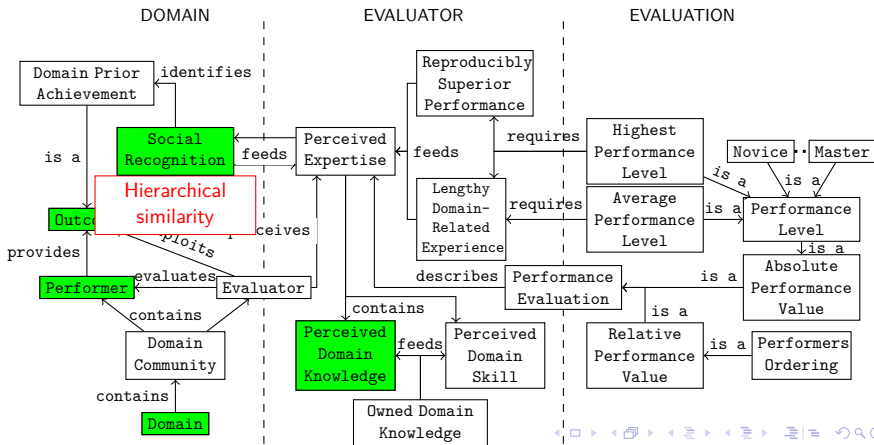
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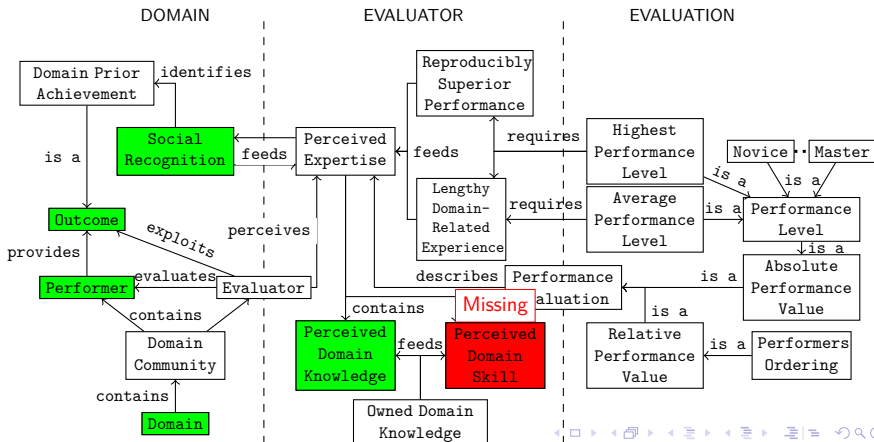
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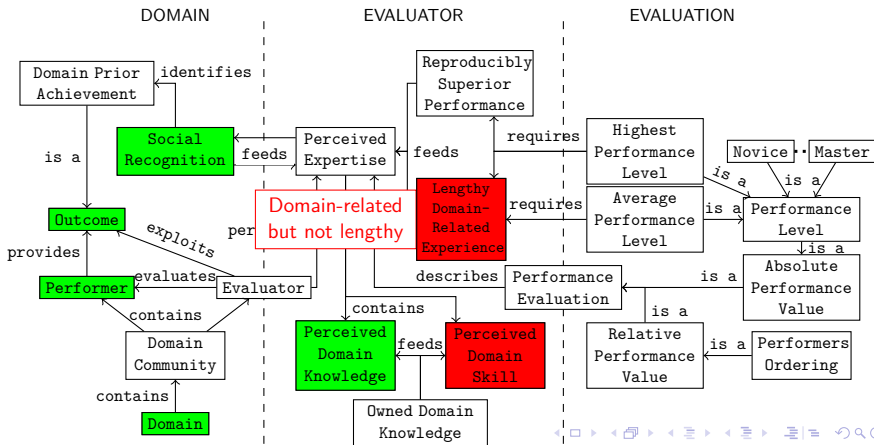
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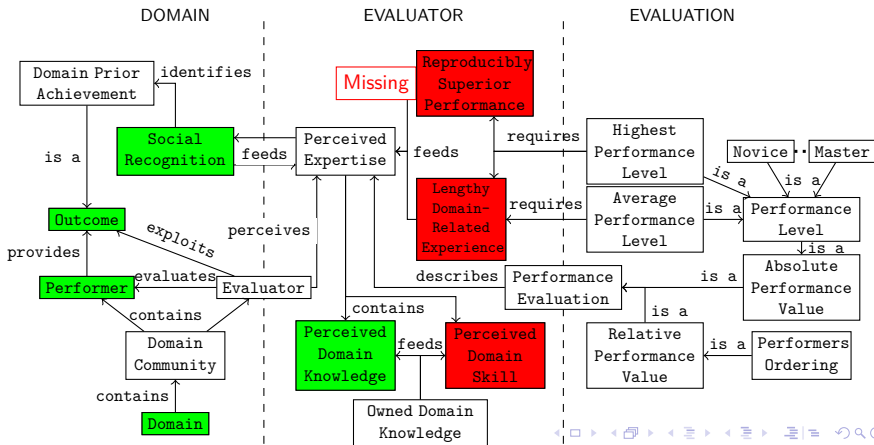
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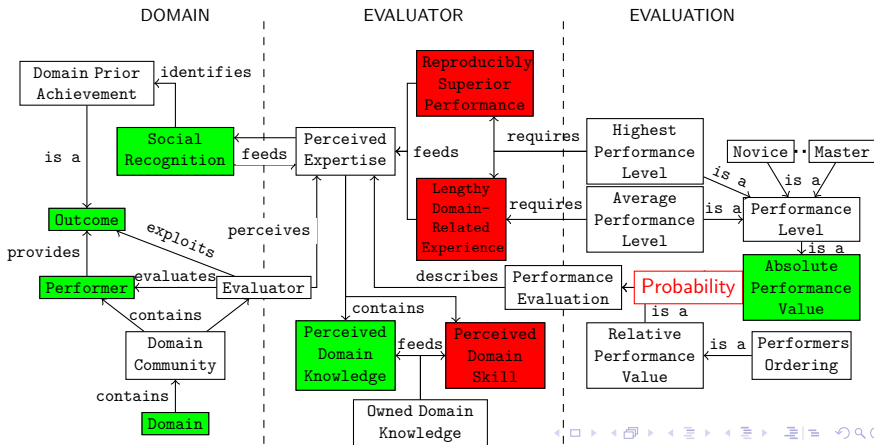
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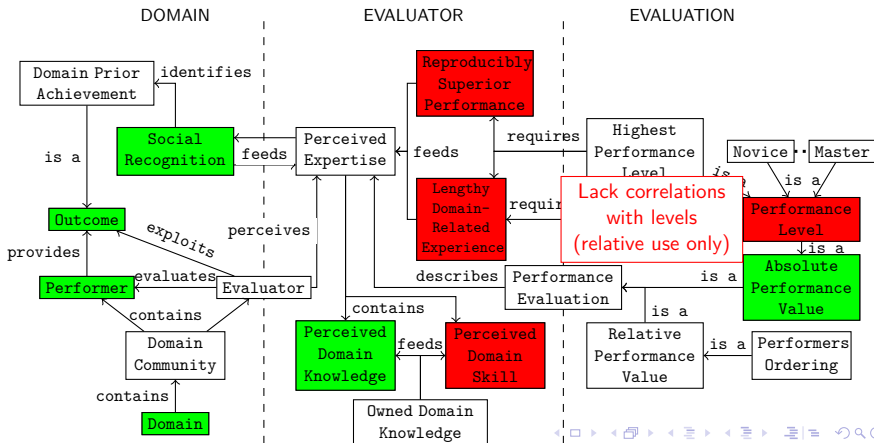
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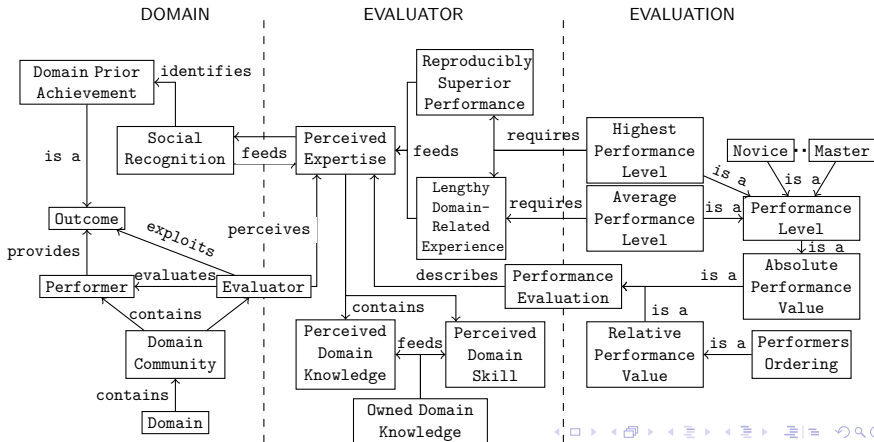
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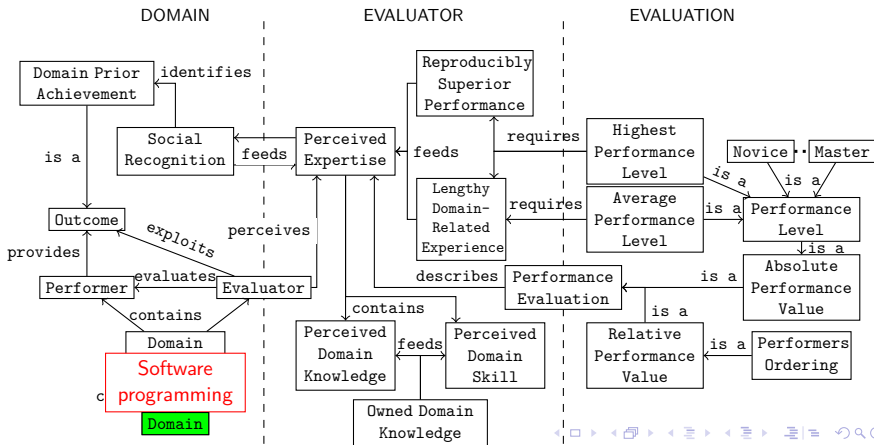
Mockus and Herbsleb [2002]

Identify skilled programmers for a piece of a software



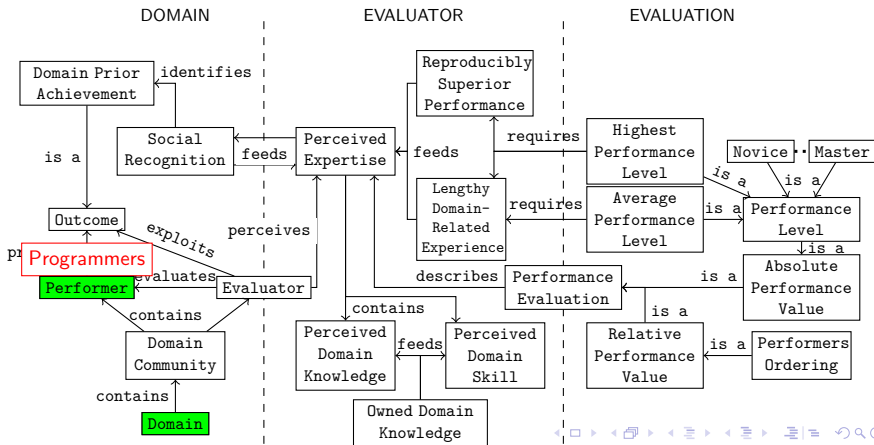
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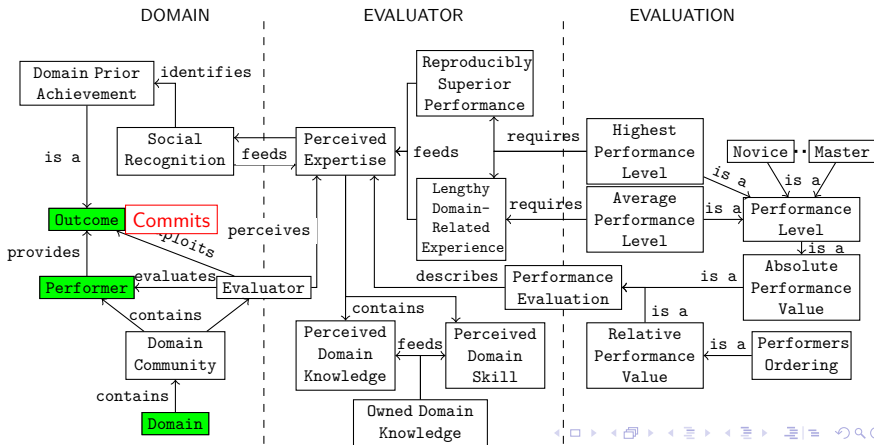
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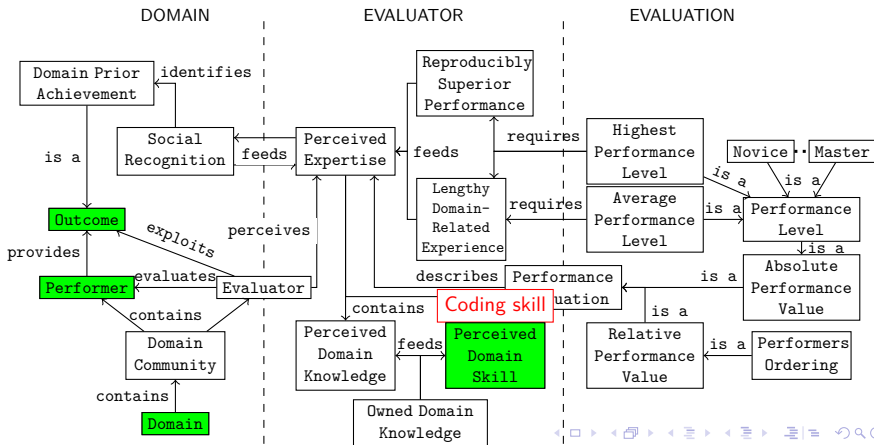
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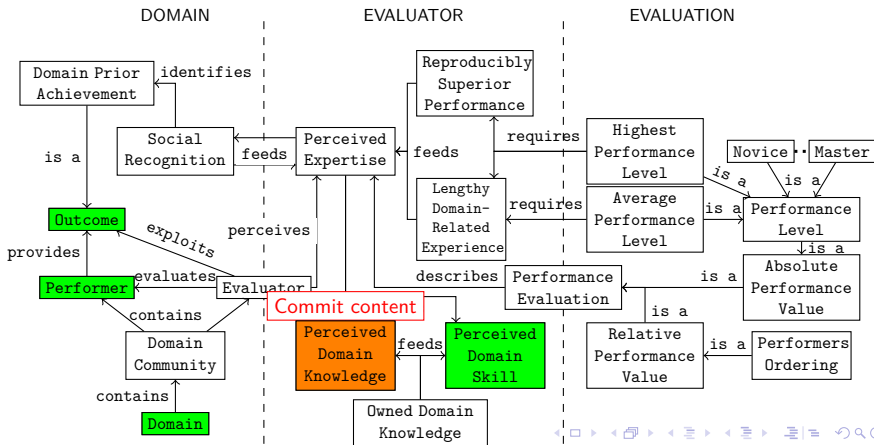
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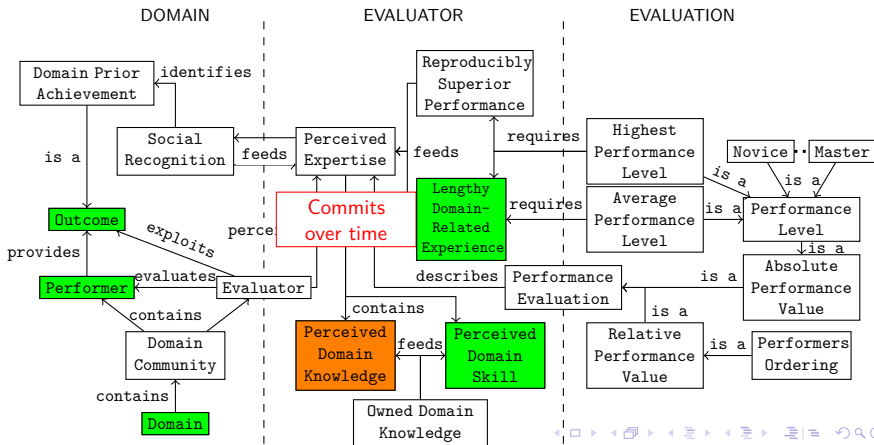
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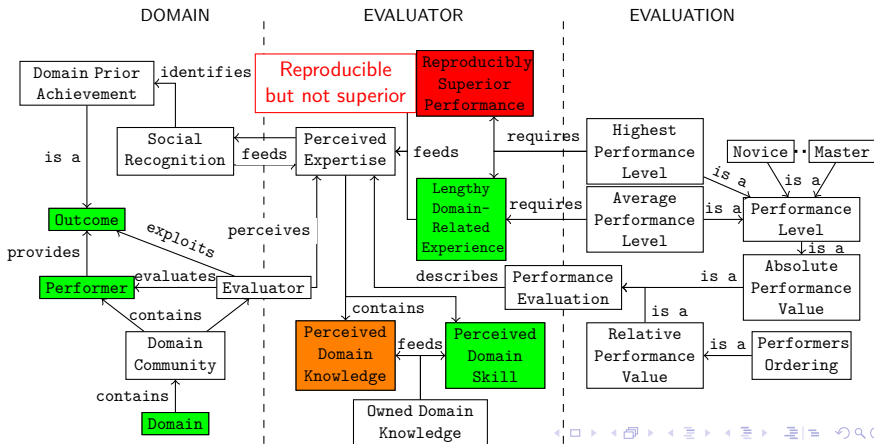
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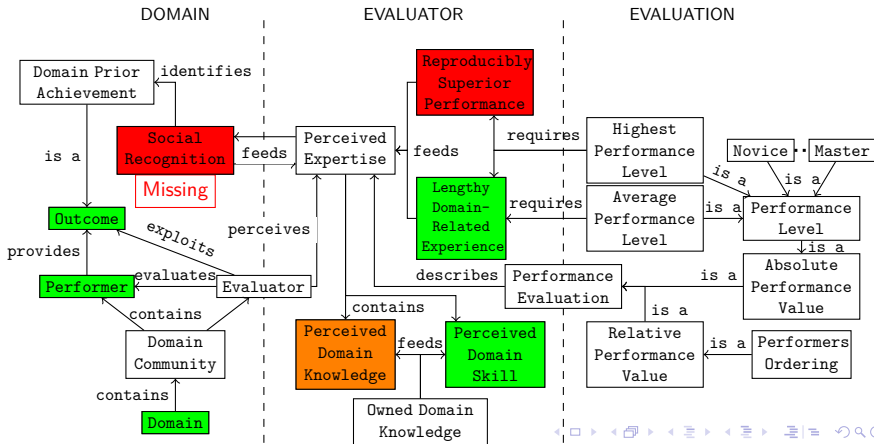
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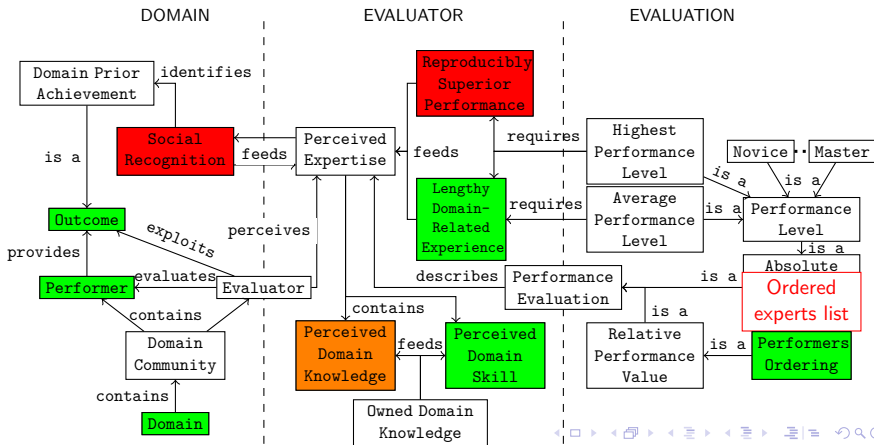
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- Consider finer expert properties (Chi [2006])
- Consider processes and time
- Complete top-down (psychology) with bottom-up (practice)

Thanks for your attention.

Suggestions?
Questions?

M. T. H. Chi. Two Approaches to the Study of Experts' Characteristics. In K. A. Ericsson, N. Charness, P. J. Feltovich, and R. R. Hoffman, editors, The Cambridge handbook of expertise and expert performance, pages 21–30. Cambridge University Press, New York, NY, US, 2006. ISBN 0-521-60081-2 (Paperback); 0-521-84097-X (Hardcover); 978-0-521-60081-1 (Paperback); 978-0-521-84097-2 (Hardcover).

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