

Design and implementation of a social networking platform for cloud deployment specialists

Christos Papoulas

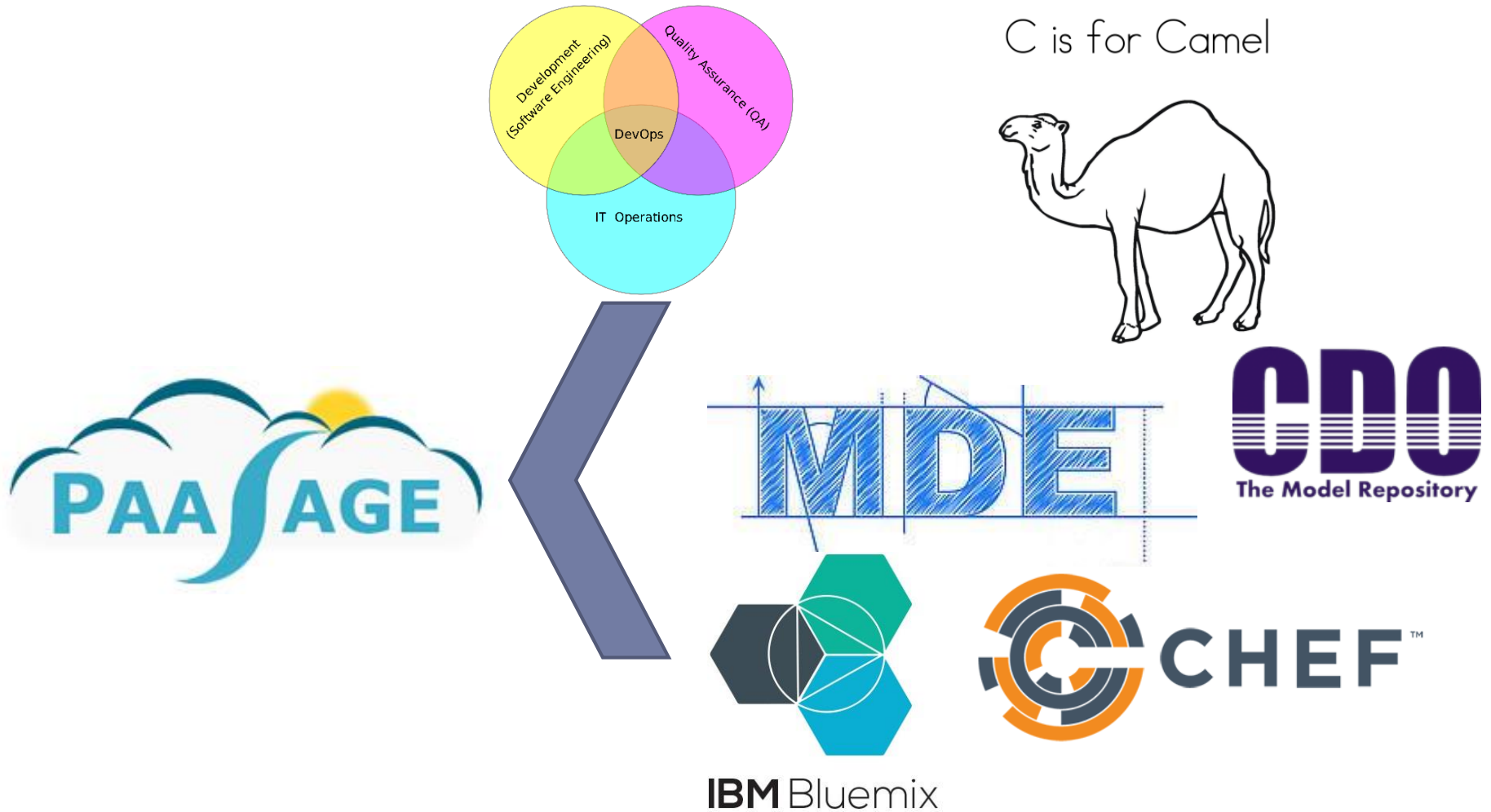
Agenda

- ▶ Motivation
- ▶ Design and Implementation
- ▶ Evaluation

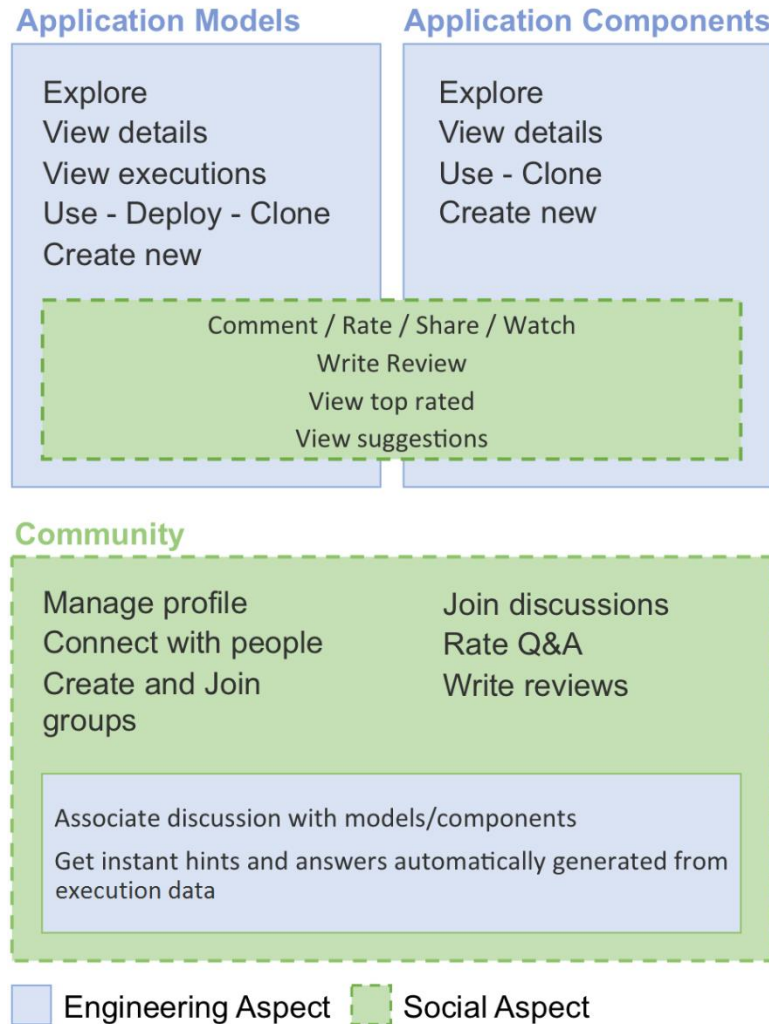


Motivation

Context



Combining Social and engineering Aspects

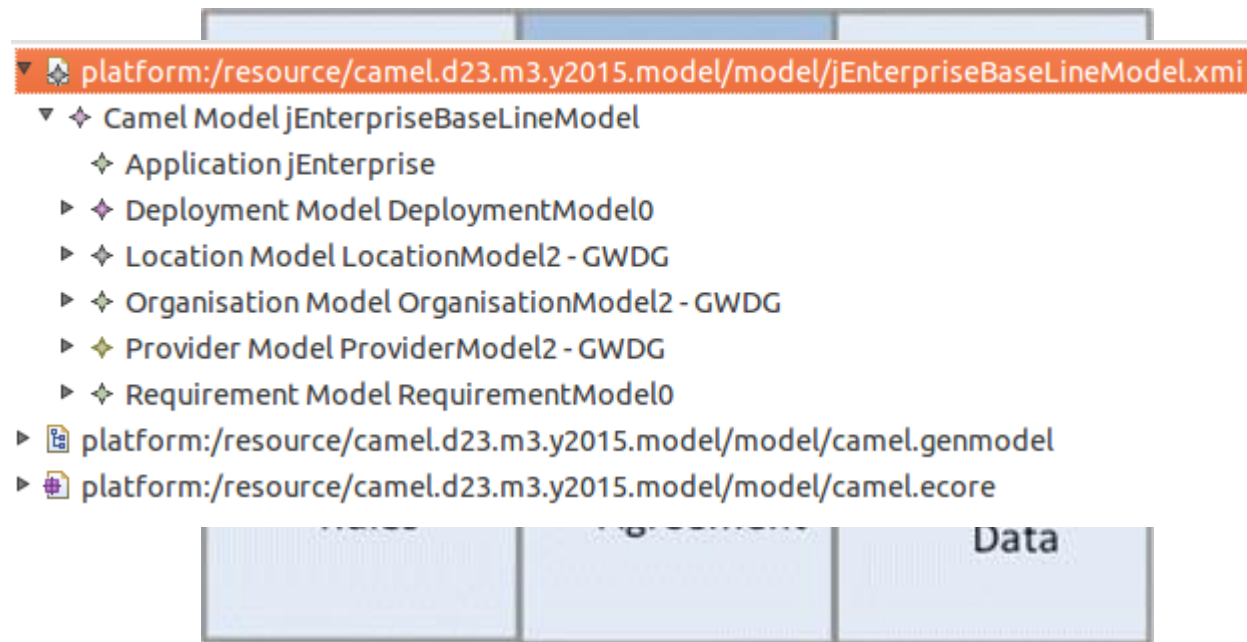


Contributions

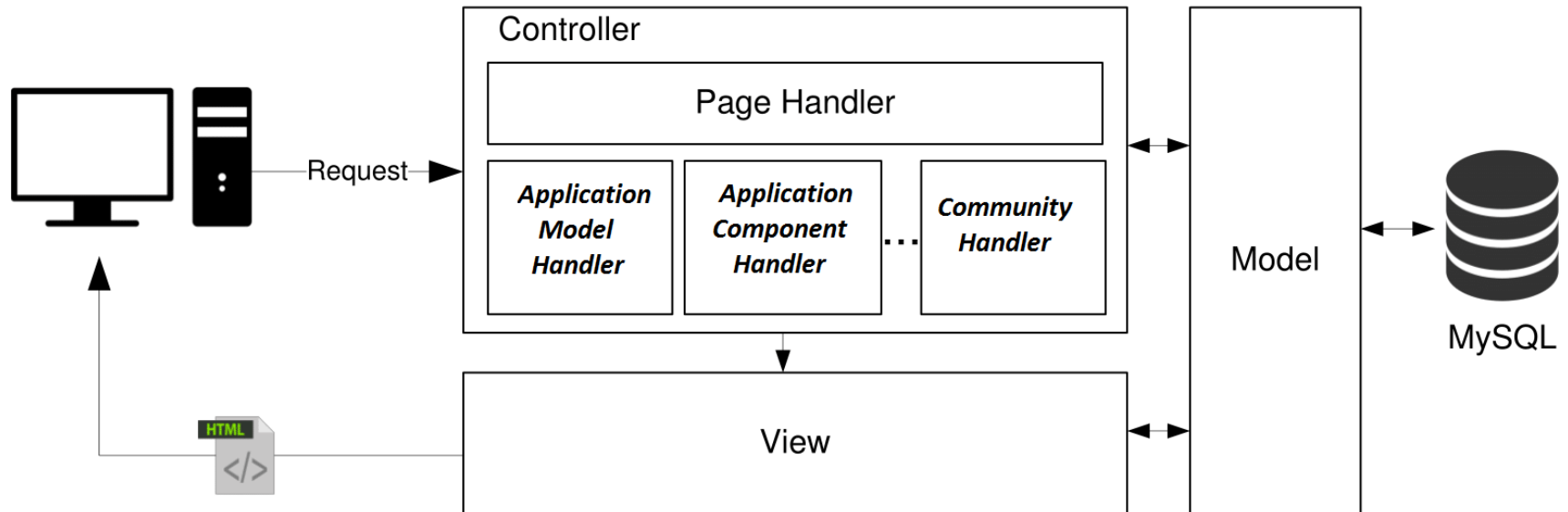
- ▶ A social networking platform (SNP) for cloud deployment specialists
- ▶ Extensive usability evaluation
- ▶ Addressing scalability aspects
- ▶ Applying natural language processing (NLP) techniques on crowd-sourced Q&A data.

Design and Implementation

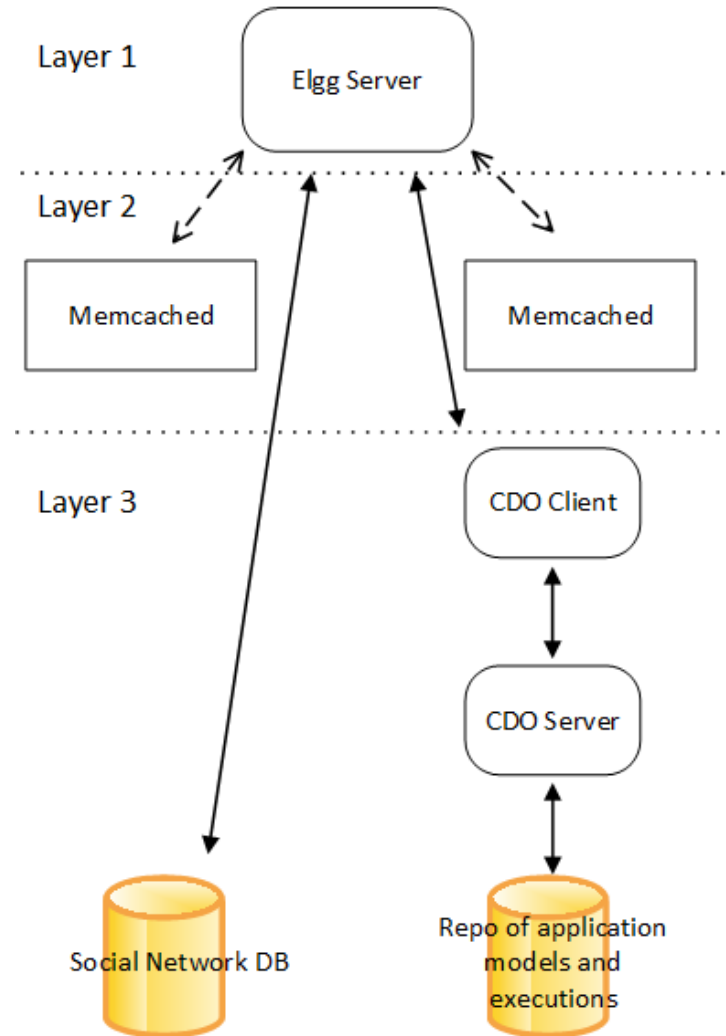
Modeling Applications: CAMEL



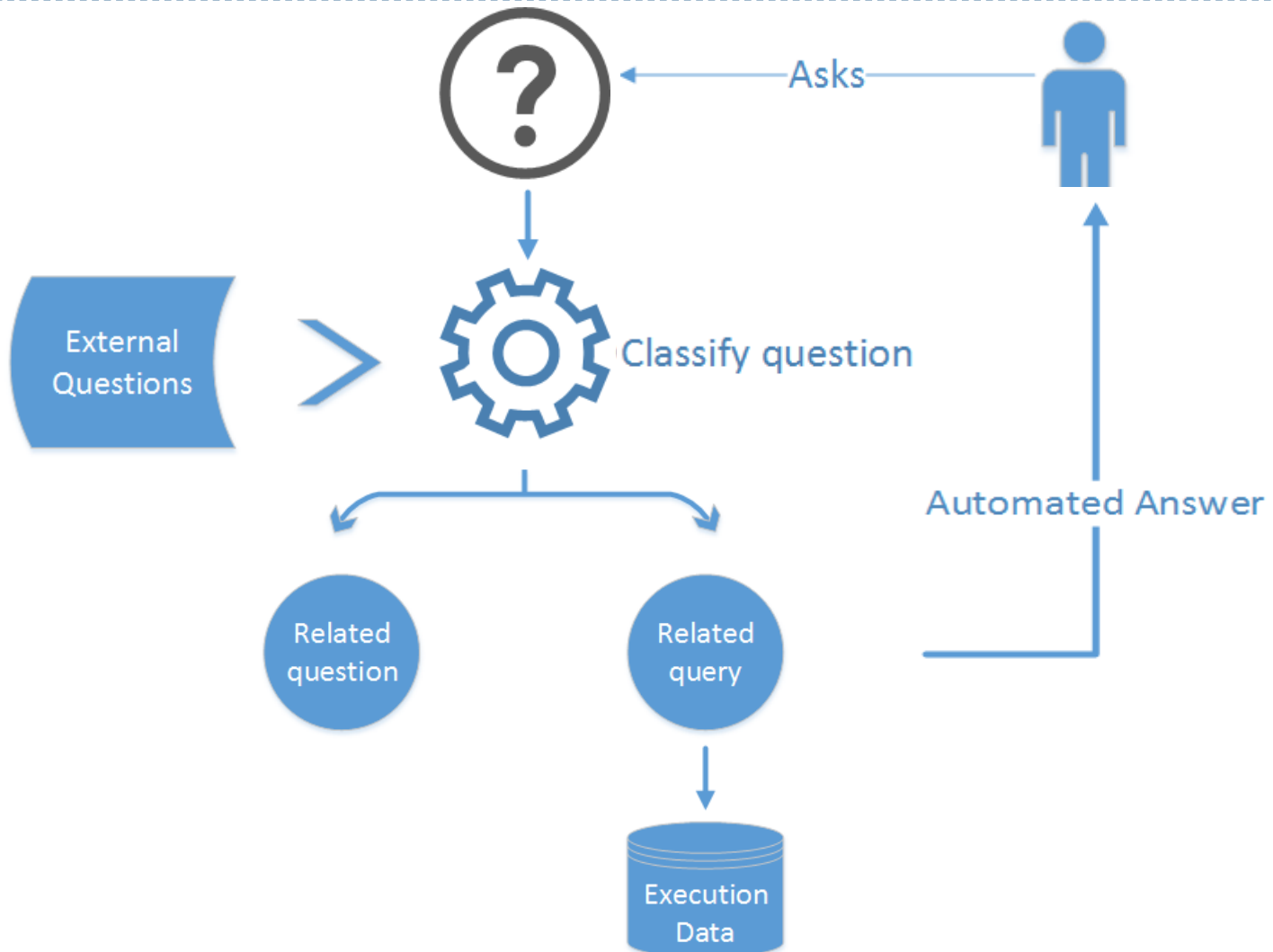
Social Networking Engine Architecture



System Architecture



Automated Replies (1/2)



Automated Replies (2/2)

JEnterprise



Question

Started by Mike Elson 20 days ago

[edit](#)

What is the most cost-effective deployment of JEnterprise on multi-cloud setups?

0 ↑ / 0 ↓

Answers(1)



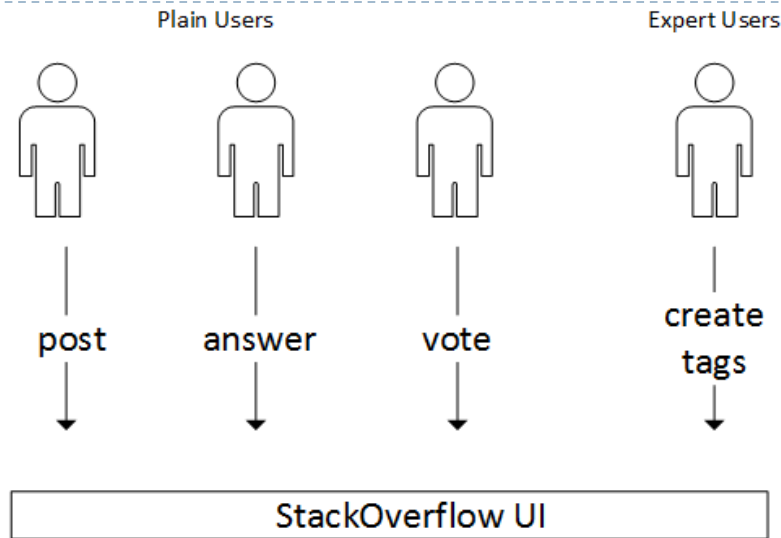
By Automaton 20 days ago

Public Edit

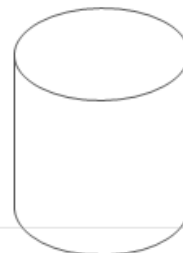
The most cost effectiveness configuration of SPEC JEnterprise2010 is: [jEnterprise18F](#). This is an aytomatically generated response based on historical data.

0 ↑ / 0 ↓

StackOverflow Community



How Scalable is SQLite? [closed]



Repository
of Q&A

▲
147
▼
★
65

I recently read this Question about [SQLite vs MySQL](#) and the answer pointed out that SQLite doesn't scale well and the official website [sort-of confirms this](#), however.

How scalable is SQLite and what are its upper most limits?

sqlite scalability

share edit flag

edited Oct 27 '09 at 1:20



Sinan Ünür

86.5k ● 10 ● 130 ● 258

asked Sep 10 '08 at 18:47



GateKiller

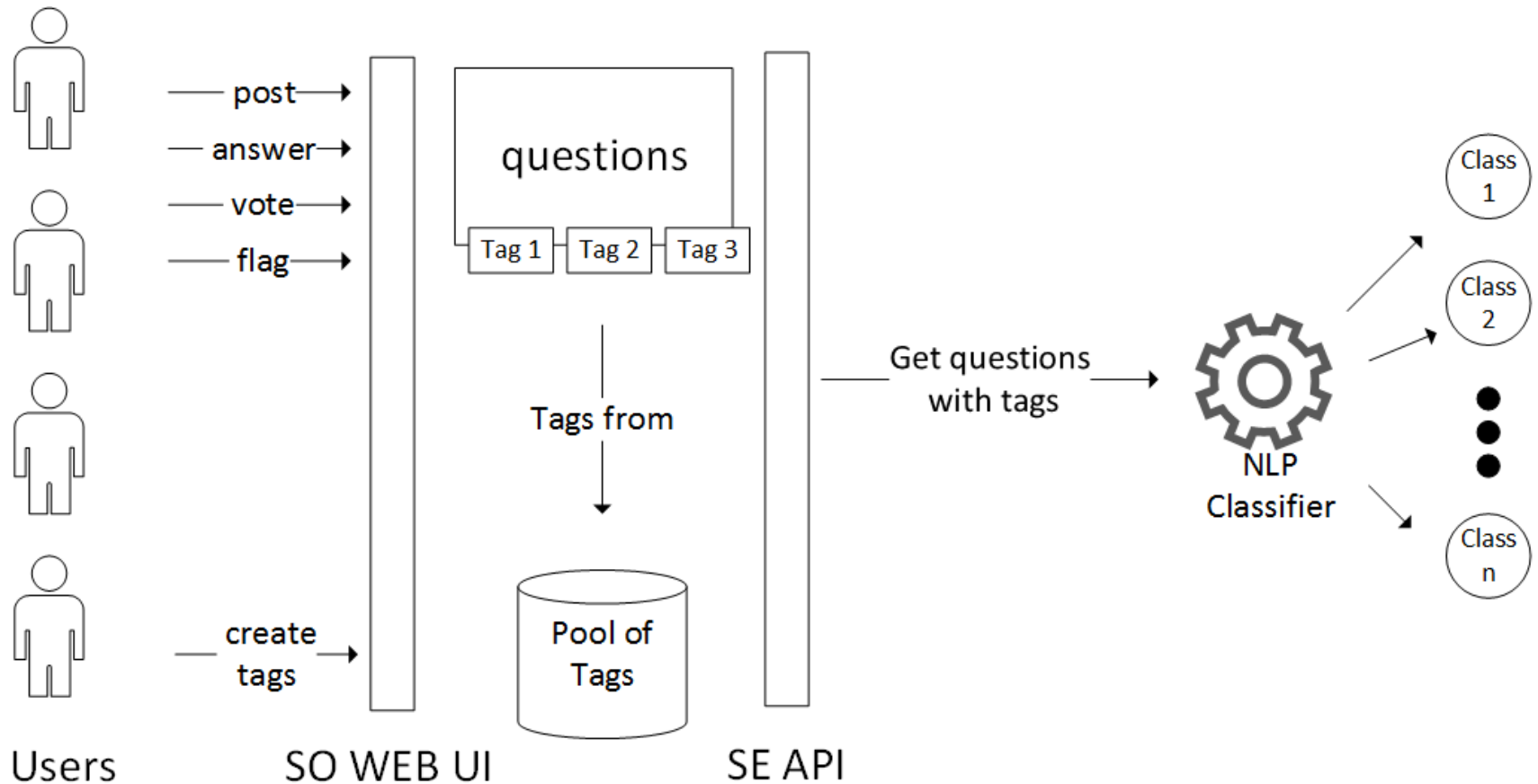
23k ● 50 ● 139 ● 183

asked 7 years ago

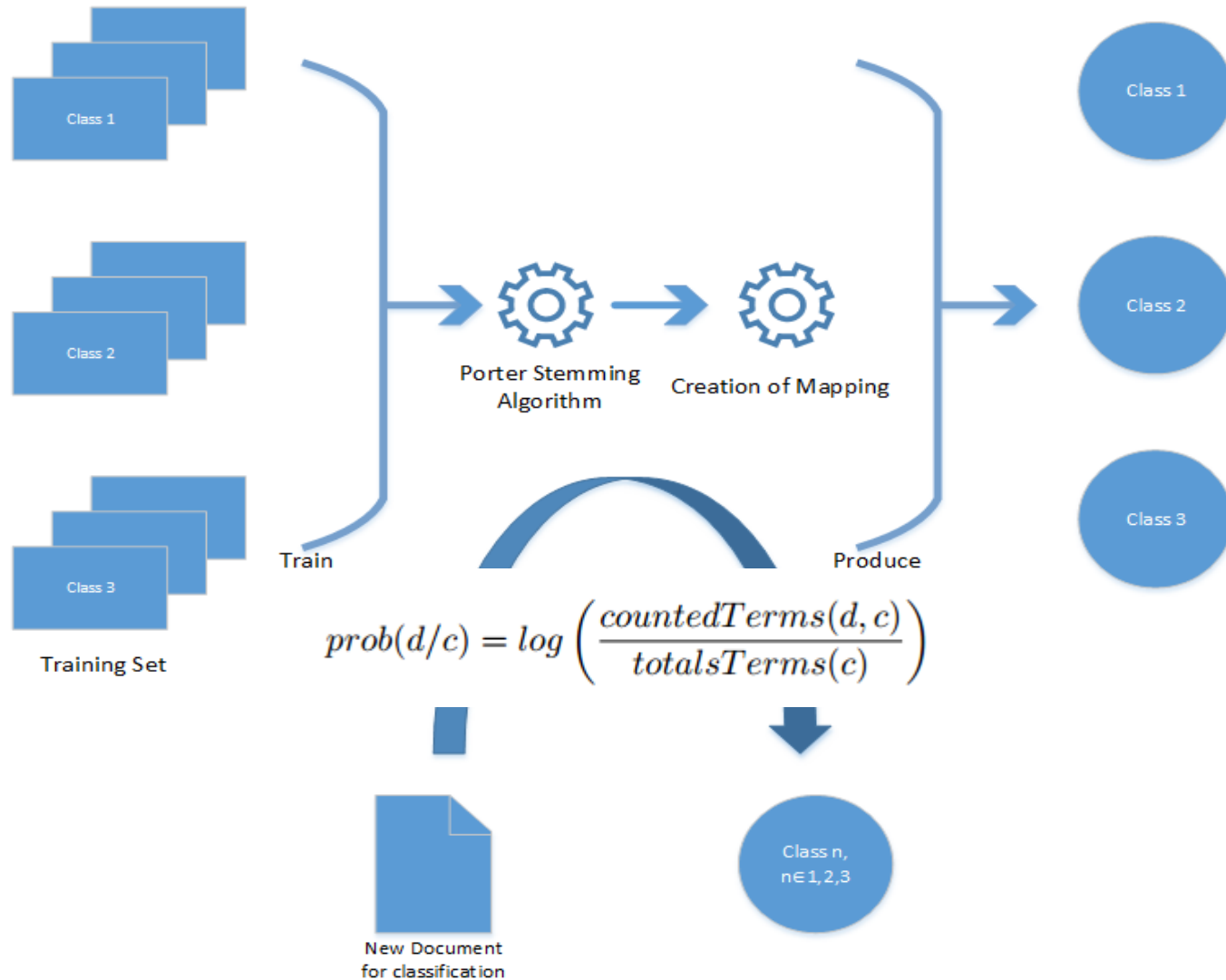
viewed 30107 times

active 2 years ago

NLP Topic Classification (1/2)



NLP Topic Classification (2/2)





Evaluation

Usability Evaluation Process

- ▶ Targeting usability of UI design
- ▶ User evaluation conducted
- ▶ Results point to user requirements and user feedback

Gender				Age			
	Male	12	80%		<30	6	40%
	Female	3	20%		30 - 40	9	53.3%
	TOTAL	15	100%		Undeclared	1	6.7%
					TOTAL	15	100.0%
DevOps expertise				Social networking expertise			
	0-1 years	3	20%		0-1 years	1	6.7%
	1-2 years	1	6.7%		1-2 years	0	0.0%
	>2 years	11	73.3%		>2 years	14	93.3%
	TOTAL	15	100.00%		TOTAL	15	100.00%
Professional expertise*				Familiarity with PaaS objectives			
	Software Engineer	13	86.7%		Limited	5	33.3%
	Researcher	6	40%		Medium	4	26.7%
	Solutions Architect	2	13.3%		High	6	40.0%
	Other	1	6.67%		TOTAL	15	100.0%

User Interface of Application Models

The screenshot displays the PAA AGE user interface. At the top is a navigation bar with links for Home, Models, Components, and Community, along with a search bar and user icons. The main content area features a model card for 'JEnterprise' by Antonis Papaioannou, created 204 days ago. The card includes a description of the SPECjEnterprise2010 benchmark, its workload, and its design goals. A 'Download xmi file' button is located at the bottom of the description. To the right of the description is a 'Reviews' section (3) showing a 5/5 rating from 5 users, with a review by Mike Elson dated 2014-12-01. Further right is a 'Model Description' section (2) showing version 0.1, 14 runs, 14 uses, 1 watch, and 1 share. To the right of the model description is a 'Contributors' section (4) showing 3 contributors and a 'Tags' section with the tag 'benchmark'. The annotations (1) through (5) are placed over the following elements: (1) Description of Application model (over the description text), (2) Model Description (over the version and statistics), (3) Reviews (over the review list), (4) engineering aspects (over the contributors section), and (5) social aspects (over the social interaction icons).

(1) Description of Application model

(2) Model Description

(3) Reviews

(4) engineering aspects

(5) social aspects

User's Feedback

Detailed model information

Automated replies

Model sharing

User profile tags UI design

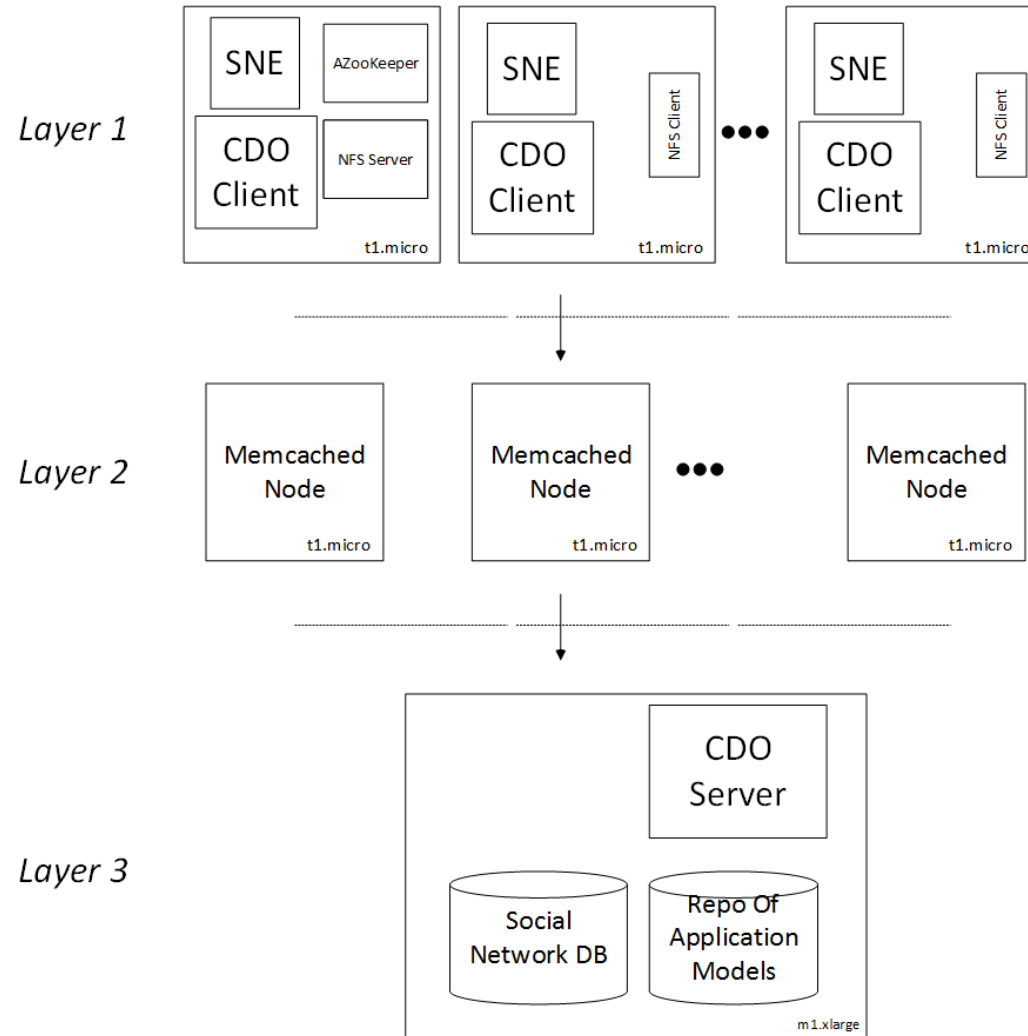
Execution histories

Social features

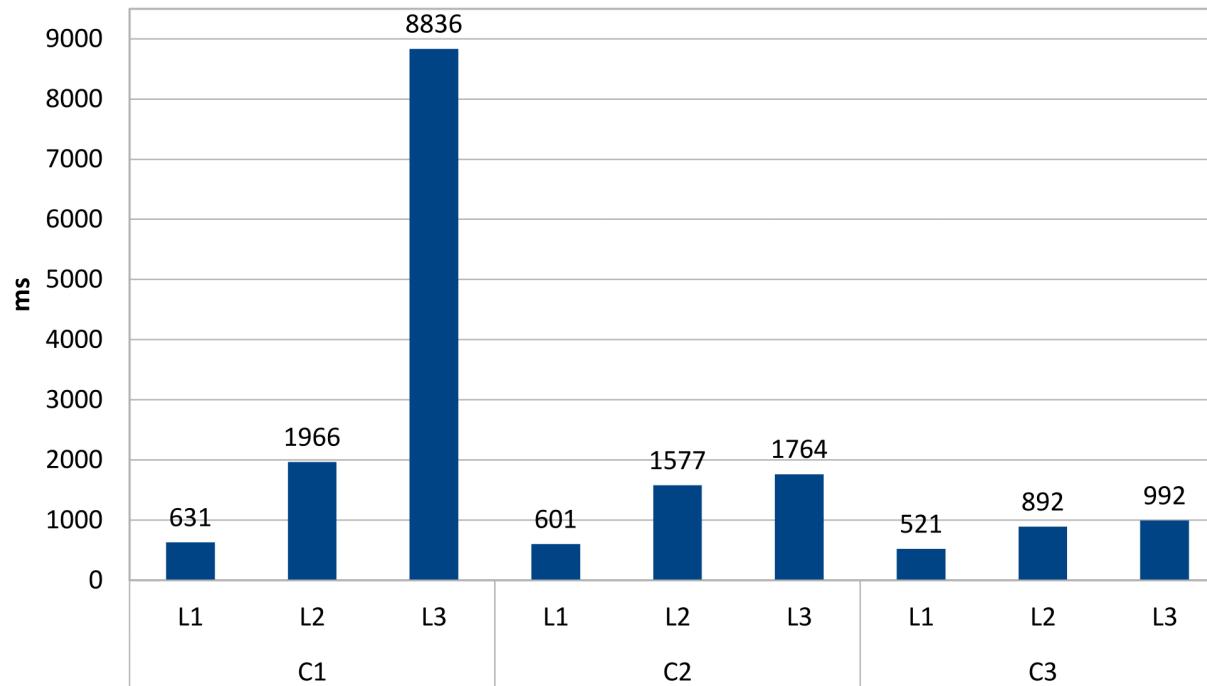
Charts and statistical information

Projects and users connection

Evaluated Architecture



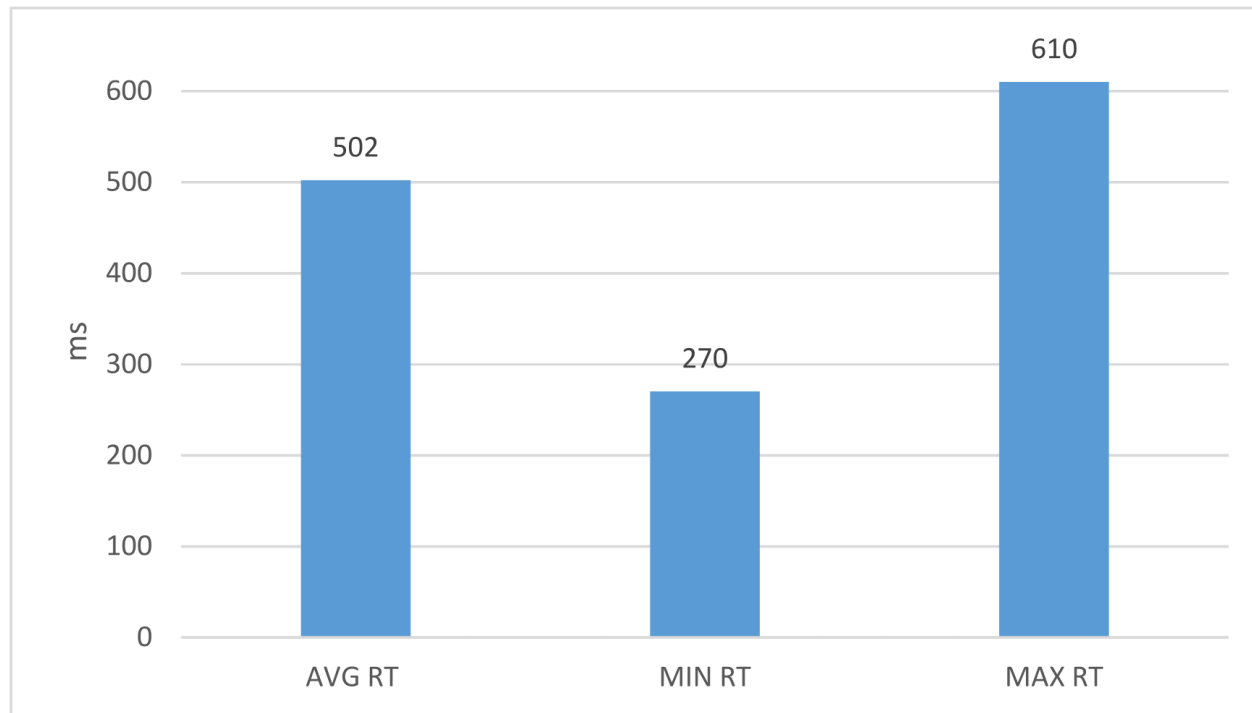
Response Time, adding Memcaches (1/2)



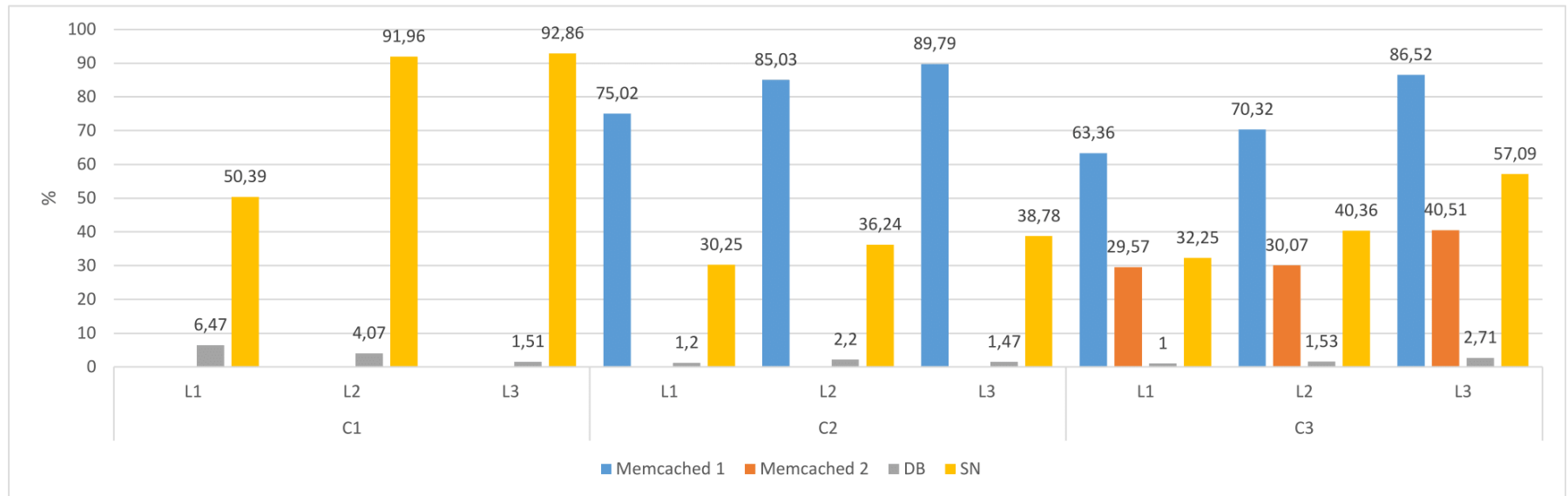
L1	10 users request 2 applications
L2	10 users request 4 applications
L3	10 users request 8 applications

C1	No memcached node
C2	One memcached node
C3	Two Memcached node

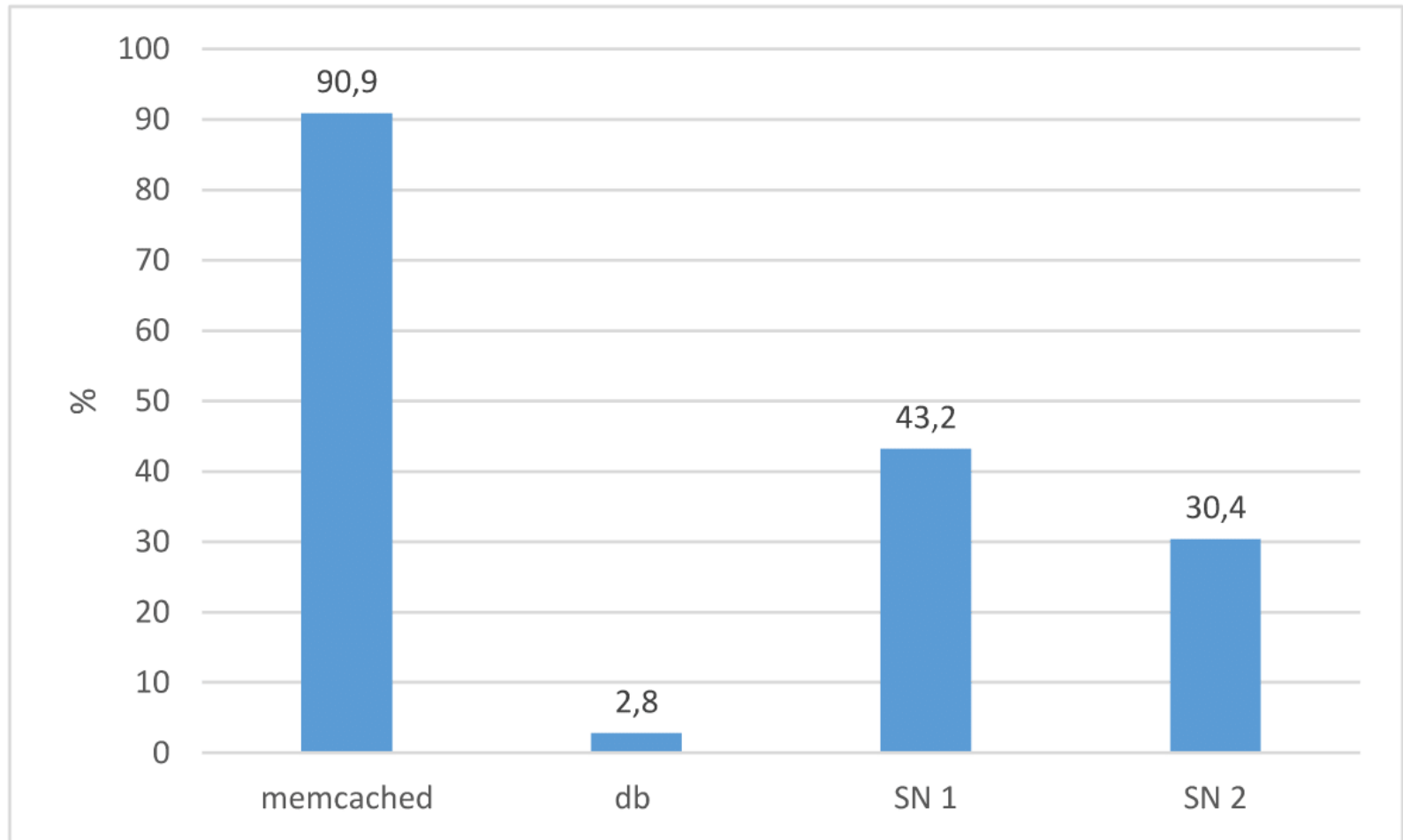
Response Time, adding SNE (2/2)



CPU Utilization, adding Memcaches (1 / 2)



CPU Utilization, adding SNE (2/2)



NLP classification evaluation

class / class	reliability	design	optimazation	performance	scalability
reliability	21	0	8	1	0
design	2	15	8	3	2
optimization	2	3	15	9	1
performance	2	1	17	9	1
scalability	10	6	3	3	8

javascript: error handling and optimization



can somebody explain me how to handle errors. my code is

-3

```
function addData(tableName, row, callback) {  
}
```



thank you.



javascript performance error-handling reliability

edited May 21 at 5:59



Tushar
24.3k ● 5 ● 20 ● 43

asked May 21 at 5:57



CodeAmour
1

Conclusion

▶ Contributions

- ▶ Extensive User Evaluation
- ▶ A social network User Interface is implemented for DevOps cloud deployment specialists.
- ▶ A scalable system architecture of our SNP is presented.
- ▶ The SN Platform can perform NLP classification on the user's input.

Thank you