



Un moteur de recherche NoSQL

pour chercher...



David Pilato

Developer | Evangelist
@dadoonet



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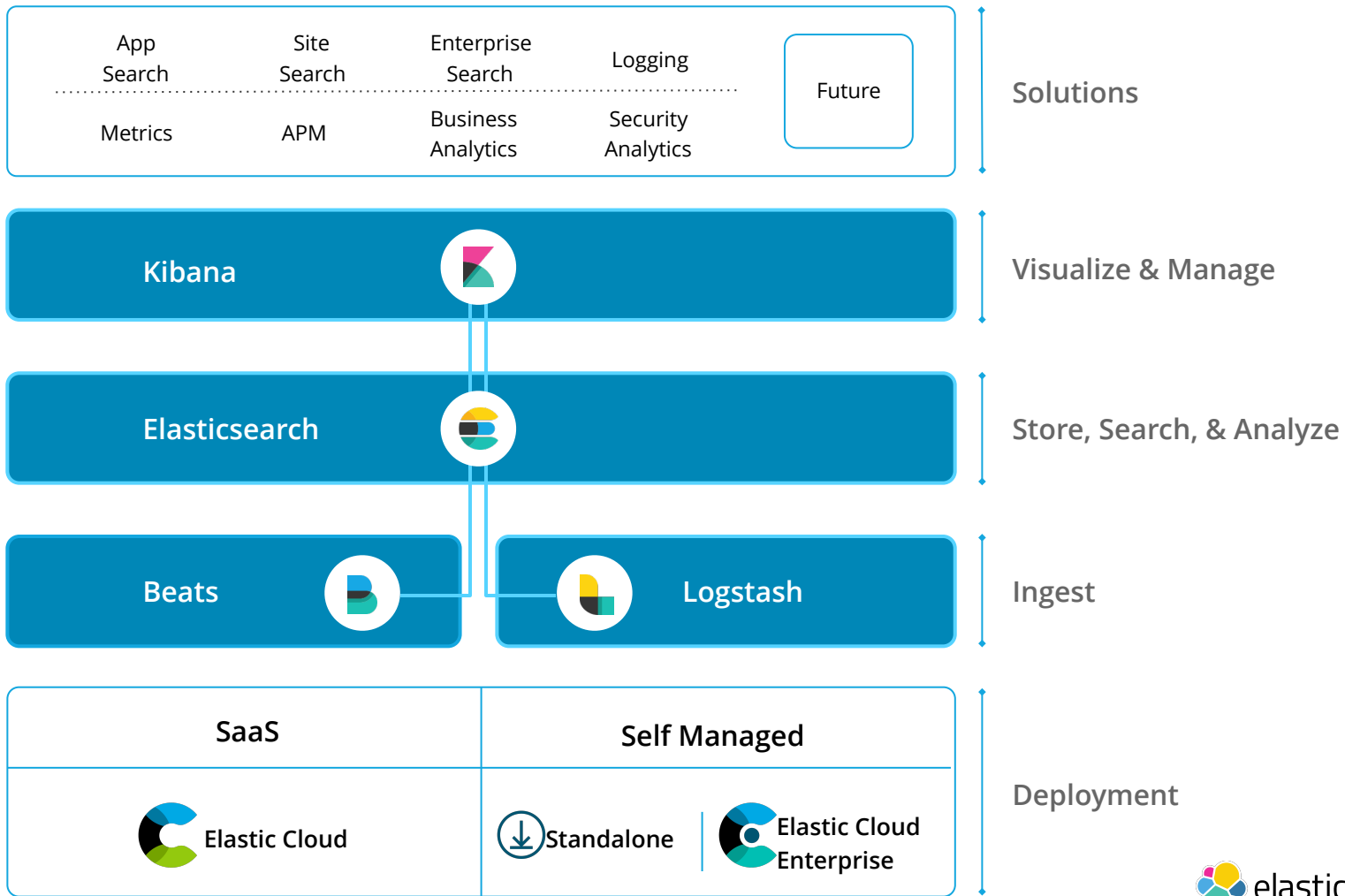
pour chercher trouver...



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Elastic Stack



GRATUIT		GOLD	PLATINUM
OPEN SOURCE	BASIC		
Téléchargement		Demande d'informations	Demande d'informations

SUITE ELASTIC / ELASTIC STACK

Elasticsearch				
✓ Scalabilité & Résilience	✓	✓	✓	✓
✓ Requêtage & Analytics	✓	✓	✓	✓
✓ Enrichissement des données	✓	✓	✓	✓
✓ Gestion & Outils	✓	✓	✓	✓
✓ Security			✓	✓
✓ Alerting			✓	✓
✓ Machine Learning				✓
Kibana				
✓ Exploration et visualisation	✓	✓	✓	✓
✓ Gestion de la Suite Elastic & Outils	✓	✓	✓	✓
✓ Stack Monitoring		✓	✓	✓

<https://www.elastic.co/fr/subscriptions>



Some data

```
CREATE TABLE user
(
  name VARCHAR(100),
  comments VARCHAR(1000)
);
INSERT INTO user VALUES ('David Pilato', 'Developer at elastic');
INSERT INTO user VALUES ('Malloum Laya', 'Worked with David at french customs service');
INSERT INTO user VALUES ('David Gageot', 'Engineer at Google');
INSERT INTO user VALUES ('David David', 'Who is that guy?');
```

Search on term

```
INSERT INTO user VALUES ('David Pilato', 'Developer at elastic');  
INSERT INTO user VALUES ('Malloum Laya', 'Worked with David at  
french customs service');  
INSERT INTO user VALUES ('David Gageot', 'Engineer at Google');  
INSERT INTO user VALUES ('David David', 'Who is that guy?');
```

```
SELECT * FROM user WHERE name="David";  
Empty set (0,00 sec)
```

Search like

```
INSERT INTO user VALUES ('David Pilato', 'Developer at elastic');
INSERT INTO user VALUES ('Malloum Laya', 'Worked with David at french customs service');
INSERT INTO user VALUES ('David Gageot', 'Engineer at Google');
INSERT INTO user VALUES ('David David', 'Who is that guy?');
```

```
SELECT * FROM user WHERE name LIKE "%David%";
```

name	comments
David Pilato	Developer at elastic
David Gageot	Engineer at Google
David David	Who is that guy?

Search in two fields

```
INSERT INTO user VALUES ('David Pilato', 'Developer at elastic');
INSERT INTO user VALUES ('Malloum Laya', 'Worked with David at french customs service');
INSERT INTO user VALUES ('David Gageot', 'Engineer at Google');
INSERT INTO user VALUES ('David David', 'Who is that guy?');
```

```
SELECT * FROM user WHERE name LIKE "%David%" OR
                                comments LIKE "%David%";
```

name	comments
David Pilato	Developer at elastic
Malloum Laya	Worked with David at french customs service
David Gageot	Engineer at Google
David David	Who is that guy?

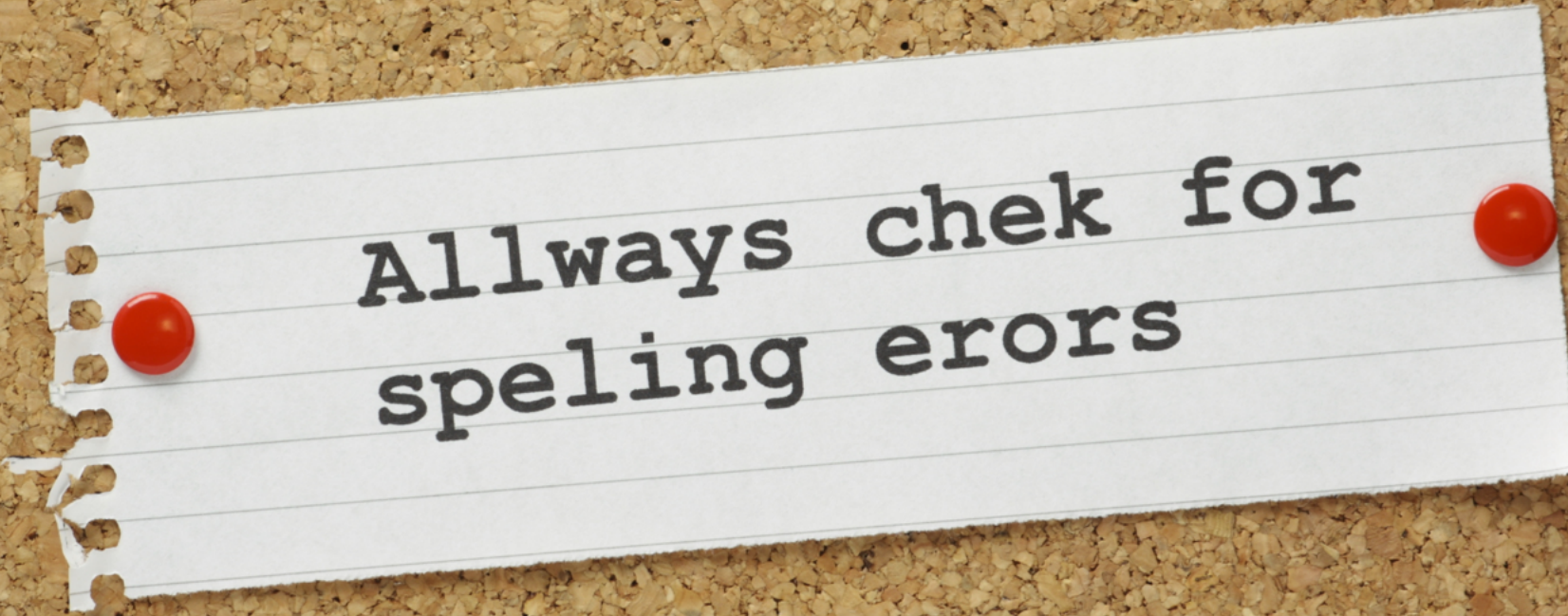


Search in two fields

```
INSERT INTO user VALUES ('David Pilato', 'Developer at elastic');
INSERT INTO user VALUES ('Malloum Laya', 'Worked with David at french customs service');
INSERT INTO user VALUES ('David Gageot', 'Engineer at Google');
INSERT INTO user VALUES ('David David', 'Who is that guy?');
```

```
SELECT * FROM user WHERE name LIKE "%David%" OR
                                comments LIKE "%David%";
```

name	comments
David Pilato	Developer at elastic
Malloum Laya	Worked with David at french customs service
David Gageot	Engineer at Google
David David	Who is that guy?



Allways chek for
speling erors

Search with typos

```
INSERT INTO user VALUES ('David Pilato', 'Developer at elastic');  
INSERT INTO user VALUES ('Malloum Laya', 'Worked with David at  
french customs service');  
INSERT INTO user VALUES ('David Gageot', 'Engineer at Google');  
INSERT INTO user VALUES ('David David', 'Who is that guy?');
```

```
SELECT * FROM user WHERE name LIKE "%Dadid%";  
Empty set (0,00 sec)
```

Search with typos

```
INSERT INTO user VALUES ('David Pilato', 'Developer at elastic');
INSERT INTO user VALUES ('Malloum Laya', 'Worked with David at french customs service');
INSERT INTO user VALUES ('David Gageot', 'Engineer at Google');
INSERT INTO user VALUES ('David David', 'Who is that guy?');
```

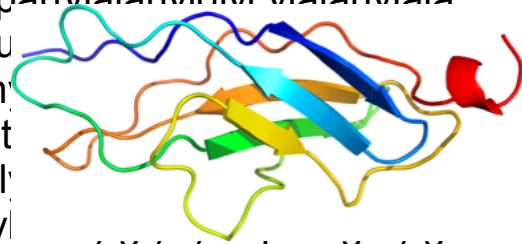
```
SELECT * FROM user WHERE name LIKE "%_adid%" OR
                        name LIKE "%D_did%" OR
                        name LIKE "%Da_id%" OR
                        name LIKE "%Dad_d%" OR
                        name LIKE "%Dadi_%";
```

David Pilato	Developer at elastic
David Gageot	Engineer at Google
David David	Who is that guy?



Pneumonoultramicroscopicsilicovolcanokoniosis
(45 Letters)

Methionylthreonylthreonylglutaminylarginyltyrosylglutamylserylleucylphenylalanylalanylglutaminylleucyllysylglutamylarginyllysylglutamylglycylalanylphenylalanylvalylprolylphenylalanylvalylthreonylleucylglycylaspartylprolylglucylisoleucylglutamylglutaminylserylleucyllysylisoleucylaspartylthreonylleucylisoleucylglutamylalanylglucylalanylasparylalanylleucylglutamylleucylglycylisoleucylprolylphenylalanylserylasparylprolylleucylalanylasparylglucylprolylthreonylisoleucylglutaminylasparaginyalanylthreonylleucylarginylalanylphenylalanylalanylalanylglucylvalylthreonylprolylalanylglutaminylcysteinylphenylalanylglutamylmethionylleucylalanylleucylisoleucylarginylglutaminyllysylhistidylprolylthreonylisoleucylprolylisoleucylglycylleucylleucylmethionyltyrosylalanylasparginylleucylvalylphenylalanylasparginyllysylglycylisoleucylaspartylglutamylphenylalanyltyrosylalanylglutaminylcysteinylglutamyllysylvalylglycylvalylaspartylserylvalylleucylvalylalanylasparylvalylprolylvalylglutaminylglutamylserylalanylprolylphenylalanylarginylglutaminylalanylalanylleucylarginylhistidylasparginylvalylalanylprolylisoleucylphenylalanylisoleucylcysteinylprolylprolylasparylalanylasparylasparylasparylleucylleucylarginylglutaminylisoleucylalanylseryltyrosylglycylarginylglycyltyrosylthreonyltyrosylleucylleucylserylarginylalanylglycylvalylthreonylglucylalanylglutamylasparginylarginylalanylalanylleucylprolylleucylasparginylhistidylleucylvalylalanyllsylleucyllysylglutamyltyrosylasparginylalanylalanylprolylprolylleucylglutaminylglycylphenylalanylglycylisoleucylserylalanylprolylasparylglutaminylvalyllsyalalanylalanylisoleucylasparylalanylglucylalanylvalylglucylalanylisoleucylserylglucylserylalanylisoleucylvalyllsylisoleucylisoleucylidylasparginylisoleucylglutamylprolylglutamyllysylmethionylleucylalanylalanylvalylglutaminylprolylmethionyllsyalalanylalanylthreonylarginylacetylseryltyrosylserylprolylserylglutaminylphenylalanylvalylphenylalanylleucylserylserylvalylprolylisoleucylglutamylleucylleucylasparginylvalylcysteinylthreonylserylserylglutaminylphenylalanylglutaminylthreonylglutaminylglutaminylalanylarginylthreonylthreonylglutaminylvalylglutaminylglutaminylphenylalanylserylglutaminylvalyltryptophyllsylprolylphenylalanylprolylglutaminylserylthreonylvalylarginylphenylalanylprolylglucylasparylvalyltyrosyllsylvalyltyrosylarginyltyrosylasparginyl





Search for terms

```
INSERT INTO user VALUES ('David Pilato', 'Developer at elastic');
INSERT INTO user VALUES ('Malloum Laya', 'Worked with David at french customs service');
INSERT INTO user VALUES ('David Gageot', 'Engineer at Google');
INSERT INTO user VALUES ('David David', 'Who is that guy?');
```

```
SELECT * FROM user WHERE name LIKE "%David Pilato%";
```

name	comments
David Pilato	Developer at elastic

Search with inverted terms

```
INSERT INTO user VALUES ('David Pilato', 'Developer at elastic');  
INSERT INTO user VALUES ('Malloum Laya', 'Worked with David at  
french customs service');  
INSERT INTO user VALUES ('David Gageot', 'Engineer at Google');  
INSERT INTO user VALUES ('David David', 'Who is that guy?');
```

```
SELECT * FROM user WHERE name LIKE "%Pilato David%";  
Empty set (0,00 sec)  
SELECT * FROM user WHERE name LIKE "%Pilato%David%";  
Empty set (0,00 sec)
```

Search for terms

```
INSERT INTO user VALUES ('David Pilato', 'Developer at elastic');
INSERT INTO user VALUES ('Malloum Laya', 'Worked with David at french customs service');
INSERT INTO user VALUES ('David Gageot', 'Engineer at Google');
INSERT INTO user VALUES ('David David', 'Who is that guy?');
```

```
SELECT * FROM user WHERE name LIKE "%David%" AND
                                name LIKE "%Pilato%";
```

name	comments
David Pilato	Developer at elastic

Synonyms



Synonyms

```
INSERT INTO user VALUES ('David Pilato', 'Developer at elastic');
INSERT INTO user VALUES ('Malloum Laya', 'Worked with David at
french customs service');
INSERT INTO user VALUES ('David Gageot', 'Engineer at Google');
INSERT INTO user VALUES ('David David', 'Who is that guy?');
```

```
SELECT * FROM user WHERE comments LIKE "%Engineer%";
```

name	comments
David Gageot	Engineer at Google

Synonyms

```
INSERT INTO user VALUES ('David Pilato', 'Developer at elastic');
INSERT INTO user VALUES ('Malloum Laya', 'Worked with David at french customs service');
INSERT INTO user VALUES ('David Gageot', 'Engineer at Google');
INSERT INTO user VALUES ('David David', 'Who is that guy?');
```

```
SELECT * FROM user WHERE comments LIKE "%Developer%" OR
                                comments LIKE "%Engineer%";
```

name	comments
David Pilato	Developer at elastic
David Gageot	Engineer at Google

Search like within 1 000 000 000 records...

```
SELECT * FROM user WHERE name LIKE "%David%";
```







**We need a search engine.
Not a database with some
search capabilities.**

David Pilato, Open Source Talks, 02/10/2018

- 1: Winter is coming.
2: Ours is the fury.
3: The choice is yours.



<u>term</u>	<u>freq</u>	<u>documents</u>
choice	1	3
coming	1	1
fury	1	2
is	3	1, 2, 3
ours	1	2
the	2	2, 3
winter	1	1
yours	1	3
Dictionary		Postings





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