

# Getting Even Better Results: Faceting, Filtering, Highlighting, and More

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PASSIONATE ABOUT TEACHING

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# Getting Better Results



**Search engines have many features to help you and your users**

**Let's learn about what it can do for us**

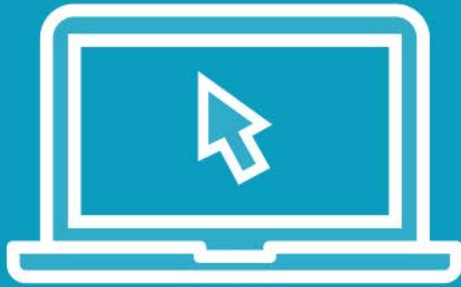
**To make search an enjoyable experience**

**Avoid user frustration**

**Profit or save money!**



# Demo



Faceting, Filtering, Highlighting, Stats,  
ExtraParams, ...

M8 D1



# Filter Query

A query that restricts the super set of documents to be returned without influencing the score

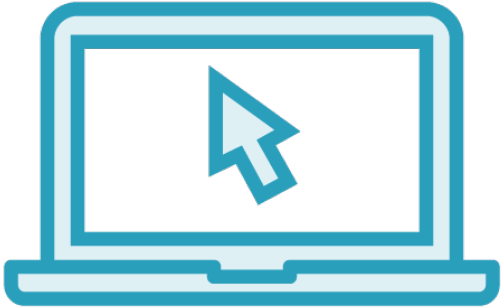


# Filtering

- Used to narrow down results
- For example narrow down courses by author or release date
- Known as **FilterQueries** in SolrNet
- The **fq** parameter in Solr
- Filter queries do not affect score
  - As opposed to **q**
- Better performance as filter queries are cached
- Complex filter queries can be created



# Demo Summary



Filtering allows us to narrow down our results

Known as FilterQueries in SolrNet

And fq in Solr

Do not affect score

Caching helps with performance

# Facets

Dynamically grouping of items from search results by category displaying counts



# Facets

- Courses can be grouped by
    - Author
    - Release date
    - Tag
  - Displays counts by items in groups
- Xavier Morera 6
- Drill down
    - Applying subsequent filter queries
  - Many types of facets
    - Field value, pivot, interval, ...

```
▼<lst name="facet_fields">
  ▼<lst name="author">
    <int name="Justin Marshall">190</int>
    <int name="Eddie Russell">145</int>
    <int name="Delano Athias">86</int>
    <int name="Laura Hawk">72</int>
    <int name="Joshua Kinney">70</int>
    <int name="Chris Glick">58</int>
    <int name="Kyle Green">58</int>
    <int name="Kurt Jones">55</int>
    <int name="Alex Hernandez">43</int>
    <int name="John Sonmez">41</int>
  </lst>
  ▼<lst name="tags">
    <int name=" process">1</int>
    <int name=" refactoring">1</int>
    <int name=".net">114</int>
    <int name=".net-4.5">1</int>
    <int name="117-101">2</int>
    <int name="117-102">1</int>
    <int name="117-201">2</int>
    <int name="156-215.75">2</int>
    <int name="156-215.76">2</int>
    <int name="120-060">1</int>
  </lst>
</lst>
▼<lst name="facet_dates">
  ▼<lst name="releasedate">
    <int name="2006-05-13T12:22:21.956Z">4</int>
    <int name="2007-05-13T12:22:21.956Z">16</int>
    <int name="2008-05-13T12:22:21.956Z">13</int>
    <int name="2009-05-13T12:22:21.956Z">122</int>
    <int name="2010-05-13T12:22:21.956Z">203</int>
    <int name="2011-05-13T12:22:21.956Z">234</int>
    <int name="2012-05-13T12:22:21.956Z">320</int>
    <int name="2013-05-13T12:22:21.956Z">530</int>
    <int name="2014-05-13T12:22:21.956Z">514</int>
    <int name="2015-05-13T12:22:21.956Z">455</int>
    <str name="gap">+1YEAR</str>
    <date name="start">2006-05-13T12:22:21.956Z</date>
    <date name="end">2016-05-13T12:22:21.956Z</date>
  </lst>
</lst>
```





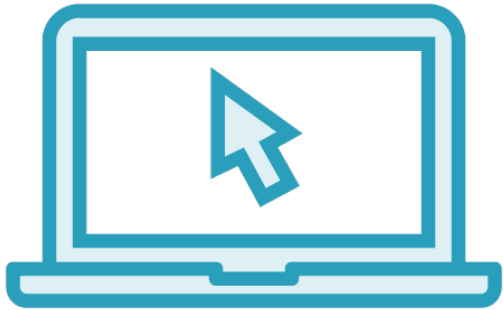
# Stats

Returns statistics for particular fields

Min, max, mean, sum, count, missing, ...



# Demo Summary



**Faceting groups items by category**

**Provides overviews to users**

- i.e. how many courses are related to Agile?
- And then used to apply filter

**Many types of facets**

**Calculate statistics of fields using StatsParameters**

- [Mean, min, max] duration of courses
- Min and max price of products in other scenario

# Highlighting

Return fragments of documents (snippets) where the user query matches the document

With visual indicators to guide users on where it is a hit



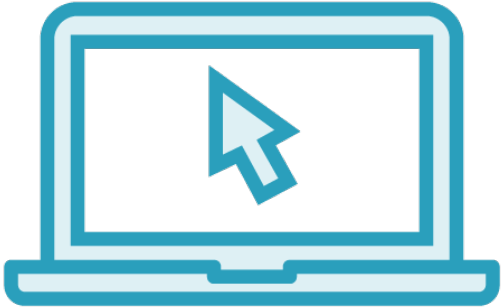
# Highlight

- Important to let user know why a document is returned
- User scans for clues to understand
- Search for `git gui`
- Example in Google
  - Using Git with a GUI | Pluralsight
  - <https://www.pluralsight.com/courses/using-git-with-gui> ▼
  - Mar 8, 2016 - Getting started with Git is hard but I will help you smooth out the learning curve, understand Git's mechanics, branching model, and in general ...
- Our sample code
  - Between `<mark>` tags

```
*** Results: ***
0: Using <mark>Git</mark> with a <mark>GUI</mark>
There is no doubt <mark>Git</mark> is taking over the world of source control management, mainly in open source
/m
- by: Xavier Morera 3/8/2016 02:38:25
[git github sourcetree bitbucket developer version-control source-control gui]
```



# Demo Summary



Highlighting helps users understand why documents match

Returning a snippet (or many)

Visual clues on the hits

# ExtraParams

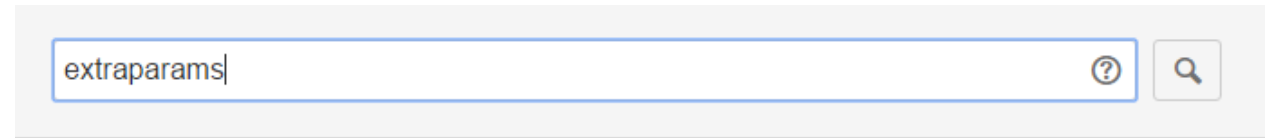
Our window directly to Solr for those parameters that SolrNet may not have an equivalent class

SolrNet is big and complex but Solr is even more complex and extensible.



# ExtraParams

- SolrNet specific
- No such concept in Solr
- Just like Raw Query Params
  - In the Admin UI
- Add SolrNet parameters without specific mapping to class or function
- Implemented as `IEnumerable<KeyValuePair<string, string>>`
  - Not a dictionary – thus allows repeated keys
- Add parameter and value
  - i.e. Boost Queries

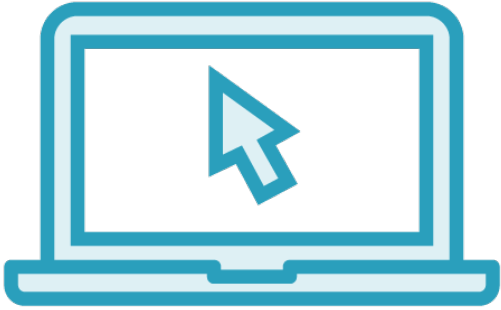


No results found for **extraparams**. Please try one of the following suggestions:

- Use more general search terms or [consult the online documentation](#) for tips.
- If you are filtering by space, content, last modification date or contributor, try removing or adjusting the filter



# Demo Summary



**ExtraParams is our window to Solr**

**Pass any parameter we require**

**Just like Raw Query Parameters**

**Allows duplicate keys**





# Takeaway



**Critical and expected features**

**Enjoyable and frustration free**

**Filtering**

**Faceting**

**Stats**

**Highlighting**

**ExtraParams**

