**Create index and insert some data:**

POST /listings/\_bulk

{ "index": {}}

{ "price" : 600000, "propertyType" : "house", "city" : "hobart", "sold" : "2017-10-28" }

{ "index": {}}

{ "price" : 800000, "propertyType" : "house", "city" : "hobart", "sold" : "2017-11-05" }

{ "index": {}}

{ "price" : 300000, "propertyType" : "apartment", "city" : "brisbane", "sold" : "2017-05-18" }

{ "index": {}}

{ "price" : 450000, "propertyType" : "land", "city" : "melbourne", "sold" : "2017-07-02" }

{ "index": {}}

{ "price" : 360000, "propertyType" : "apartment", "city" : "melbourne", "sold" : "2017-08-19" }

{ "index": {}}

{ "price" : 400000, "propertyType" : "house", "city" : "hobart", "sold" : "2017-11-05" }

{ "index": {}}

{ "price" : 900000, "propertyType" : "house", "city" : "sydney", "sold" : "2017-01-01" }

{ "index": {}}

{ "price" : 500000, "propertyType" : "land", "city" : "brisbane", "sold" : "2017-02-12" }

**basic aggregation.**

GET /listings/\_search

{

"aggs" : {

"my\_aggregation" : {

"terms" : {

"field" : "propertyType",

"size": 1,

"shard\_size": 1

}

}

}

}

**Note that, by default, the function score query multiplies the scores together**

GET /listings/\_search

{

"query": {

"function\_score": {

"query": {

"match\_all": {}

},

"functions": [

{

"filter": {"match": { "product": "premier" }},

"weight": 3

},

{

"filter": {"match": { "address": "Brisbane" }},

"weight": 2

}

]

}

}

}

**Find the average price of each property type**

GET /listings/\_search

{

"aggs": {

"my\_aggregation": {

"terms": {

"field": "propertyType"

},

"aggs": {

"my\_sub\_aggregation": {

"avg": {

"field": "price"

}

}

}

}

}

}

# what is doc\_count\_error\_upper\_bound and sum\_other\_doc\_count???

# sum\_other\_doc\_count: number of documents not represented in the results (due to "size")

# doc\_count\_error\_upper\_bound: maximum potential document count of a term not included in the results

# https://www.elastic.co/guide/en/elasticsearch/reference/current/search-aggregations-bucket-terms-aggregation.html#search-aggregations-bucket-terms-aggregation-approximate-counts

GET /listings/\_search

{

"aggs" : {

"my\_aggregation" : {

"terms" : {

"field" : "propertyType",

"size": 1,

"shard\_size": 1

}

}

}

}

# Use "show\_term\_doc\_count\_error" to get worst case error per term

# - i.e. by how much each count may be an under-estimate of the real value

GET /listings/\_search

{

"aggs" : {

"my\_aggregation" : {

"terms" : {

"field" : "propertyType",

"size": 1,

"shard\_size": 1,

"show\_term\_doc\_count\_error": true

}

}

}

}