

05_filter_data

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1 Filter Data

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```
[ ]: import pandas as pd
data = pd.read_csv('./data/artwork_data.csv', low_memory=False)
```

```
[ ]: data.head()
```

```
[ ]:
    id accession_number      artist artistRole  artistId \
0  1035      A00001  Blake, Robert    artist        38
1  1036      A00002  Blake, Robert    artist        38
2  1037      A00003  Blake, Robert    artist        38
3  1038      A00004  Blake, Robert    artist        38
4  1039      A00005  Blake, William    artist        39

                                title                                dateText \
0  A Figure Bowing before a Seated Old Man with h...  date not known
1  Two Drawings of Frightened Figures, Probably f...  date not known
2  The Preaching of Warning. Verso: An Old Man En...      ?c.1785
3  Six Drawings of Figures with Outstretched Arms      date not known
4  The Circle of the Lustful: Francesca da Rimini... 1826-7, reprinted 1892

                                medium \
0  Watercolour, ink, chalk and graphite on paper...
1                                Graphite on paper
2  Graphite on paper. Verso: graphite on paper
3                                Graphite on paper
4                                Line engraving on paper

                                creditLine  year  acquisitionYear \
0  Presented by Mrs John Richmond 1922  NaN      1922.0
1  Presented by Mrs John Richmond 1922  NaN      1922.0
2  Presented by Mrs John Richmond 1922  1785      1922.0
3  Presented by Mrs John Richmond 1922  NaN      1922.0
4  Purchased with the assistance of a special gra... 1826      1919.0
```

	support:	dimensions	width	height	depth	units	inscription	\
0		394 x 419 mm	394	419	NaN	mm	NaN	
1		311 x 213 mm	311	213	NaN	mm	NaN	
2		343 x 467 mm	343	467	NaN	mm	NaN	
3		318 x 394 mm	318	394	NaN	mm	NaN	
4	image:	243 x 335 mm	243	335	NaN	mm	NaN	

	thumbnailCopyright	thumbnailUrl	\
0	NaN	http://www.tate.org.uk/art/images/work/A/A00/A...	
1	NaN	http://www.tate.org.uk/art/images/work/A/A00/A...	
2	NaN	http://www.tate.org.uk/art/images/work/A/A00/A...	
3	NaN	http://www.tate.org.uk/art/images/work/A/A00/A...	
4	NaN	http://www.tate.org.uk/art/images/work/A/A00/A...	

	url
0	http://www.tate.org.uk/art/artworks/blake-a-fi...
1	http://www.tate.org.uk/art/artworks/blake-two-...
2	http://www.tate.org.uk/art/artworks/blake-the-...
3	http://www.tate.org.uk/art/artworks/blake-six-...
4	http://www.tate.org.uk/art/artworks/blake-the-...

```
[ ]: # Filtering data
data.filter(items=['id', 'artist'])
```

```
[ ]:      id      artist
0      1035    Blake, Robert
1      1036    Blake, Robert
2      1037    Blake, Robert
3      1038    Blake, Robert
4      1039    Blake, William
...
69196  122960  P-Orridge, Genesis
69197  122961  P-Orridge, Genesis
69198  121181    Hatoum, Mona
69199  112306    Creed, Martin
69200  127035  Brunias, Agostino
```

[69201 rows x 2 columns]

```
[ ]: # Any column which has word "year" in its header name
# like param is case sensitive by default
data.filter(like="year")
```

```
[ ]:      year
0      NaN
1      NaN
2      1785
```

```

3      NaN
4      1826
...
69196  1975
69197  1976
69198  1996
69199  2000
69200  1764

```

[69201 rows x 1 columns]

```
[ ]: data.filter(like="artist")
```

```

[ ]:
      artist artistRole  artistId
0    Blake, Robert   artist      38
1    Blake, Robert   artist      38
2    Blake, Robert   artist      38
3    Blake, Robert   artist      38
4    Blake, William   artist      39
...
69196 P-Orridge, Genesis   artist  16646
69197 P-Orridge, Genesis   artist  16646
69198   Hatoum, Mona      artist   2365
69199   Creed, Martin      artist   2760
69200  Brunias, Agostino    artist   3824

```

[69201 rows x 3 columns]

```
[ ]: # Case insensitive year by using regex
data.filter(regex="(?)year")
```

```

[ ]:
      year  acquisitionYear
0      NaN             1922.0
1      NaN             1922.0
2     1785             1922.0
3      NaN             1922.0
4     1826             1919.0
...
69196  1975             2013.0
69197  1976             2013.0
69198  1996             2013.0
69199  2000             2013.0
69200  1764             2013.0

```

[69201 rows x 2 columns]

```
[ ]: data.filter(regex="year|Year")
```

```
[ ]:      year  acquisitionYear
0      NaN      1922.0
1      NaN      1922.0
2     1785      1922.0
3      NaN      1922.0
4     1826      1919.0
...
69196  1975      2013.0
69197  1976      2013.0
69198  1996      2013.0
69199  2000      2013.0
69200  1764      2013.0
```

[69201 rows x 2 columns]

```
[ ]: data.filter(axis=0, regex="^100.$")
```

```
[ ]:      id accession_number      artist artistRole \
1000  14704      A01004  Turner, Joseph Mallord William  artist
1001  14705      A01005  Turner, Joseph Mallord William  artist
1002  14706      A01006  Turner, Joseph Mallord William  artist
1003  14707      A01007  Turner, Joseph Mallord William  artist
1004  14708      A01008  Turner, Joseph Mallord William  artist
1005  14709      A01009  Turner, Joseph Mallord William  artist
1006  14710      A01010  Turner, Joseph Mallord William  artist
1007  14711      A01011  Turner, Joseph Mallord William  artist
1008  14712      A01012  Turner, Joseph Mallord William  artist
1009  14713      A01013  Turner, Joseph Mallord William  artist

      artistId      title dateText \
1000      558      Hedging and Ditching      1812
1001      558      Hedging and Ditching, engraved by J.C. Easling      1812
1002      558      River Wye      1812
1003      558      River Wye, engraved by W. Annis      1812
1004      558      Chain of Alps from Grenoble to Chamberi      1812
1005      558      Chain of Alps from Grenoble to Chamberi, engra...      1812
1006      558      Mer de Glace      1812
1007      558      Mer de Glace      1812
1008      558      Rivaux Abbey, Yorkshire      1812
1009      558      Rivaux Abbey, engraved by Henry Dawe      1812

      medium \
1000  Etching and engraving on paper
1001  Etching and mezzotint on paper
1002      Print on paper
1003  Etching and mezzotint on paper
1004  Etching and engraving on paper
```

1005 Etching and mezzotint on paper
 1006 Etching and engraving on paper
 1007 Etching and mezzotint on paper
 1008 Etching and engraving on paper
 1009 Etching and mezzotint on paper

	creditLine	year	\
1000	Presented by A. Acland Allen through the Art F...	1812	
1001	Presented by A. Acland Allen through the Art F...	1812	
1002	Presented by A. Acland Allen through the Art F...	1812	
1003	Presented by A. Acland Allen through the Art F...	1812	
1004	Presented by A. Acland Allen through the Art F...	1812	
1005	Presented by A. Acland Allen through the Art F...	1812	
1006	Presented by A. Acland Allen through the Art F...	1812	
1007	Presented by A. Acland Allen through the Art F...	1812	
1008	Presented by A. Acland Allen through the Art F...	1812	
1009	Presented by A. Acland Allen through the Art F...	1812	

	acquisitionYear	image	dimensions	width	height	depth	units	\
1000	1925.0	image:	184 x 259 mm	184	259	NaN	mm	
1001	1925.0	image:	186 x 262 mm	186	262	NaN	mm	
1002	1925.0	image:	183 x 264 mm	183	264	NaN	mm	
1003	1925.0	image:	184 x 265 mm	184	265	NaN	mm	
1004	1925.0	image:	178 x 259 mm	178	259	NaN	mm	
1005	1925.0	image:	178 x 261 mm	178	261	NaN	mm	
1006	1925.0	image:	178 x 253 mm	178	253	NaN	mm	
1007	1925.0	image:	179 x 257 mm	179	257	NaN	mm	
1008	1925.0	image:	182 x 265 mm	182	265	NaN	mm	
1009	1925.0	image:	183 x 266 mm	183	266	NaN	mm	

	inscription	thumbnail	copyright	\
1000	NaN		NaN	
1001	NaN		NaN	
1002	NaN		NaN	
1003	NaN		NaN	
1004	NaN		NaN	
1005	NaN		NaN	
1006	NaN		NaN	
1007	NaN		NaN	
1008	NaN		NaN	
1009	NaN		NaN	

	thumbnailUrl	\
1000	http://www.tate.org.uk/art/images/work/A/A01/A...	
1001	http://www.tate.org.uk/art/images/work/A/A01/A...	
1002	http://www.tate.org.uk/art/images/work/A/A01/A...	
1003	http://www.tate.org.uk/art/images/work/A/A01/A...	

```

1004 http://www.tate.org.uk/art/images/work/A/A01/A...
1005 http://www.tate.org.uk/art/images/work/A/A01/A...
1006 http://www.tate.org.uk/art/images/work/A/A01/A...
1007 http://www.tate.org.uk/art/images/work/A/A01/A...
1008 http://www.tate.org.uk/art/images/work/A/A01/A...
1009 http://www.tate.org.uk/art/images/work/A/A01/A...

```

```

url
1000 http://www.tate.org.uk/art/artworks/turner-hed...
1001 http://www.tate.org.uk/art/artworks/turner-hed...
1002 http://www.tate.org.uk/art/artworks/turner-riv...
1003 http://www.tate.org.uk/art/artworks/turner-riv...
1004 http://www.tate.org.uk/art/artworks/turner-cha...
1005 http://www.tate.org.uk/art/artworks/turner-cha...
1006 http://www.tate.org.uk/art/artworks/turner-mer...
1007 http://www.tate.org.uk/art/artworks/turner-mer...
1008 http://www.tate.org.uk/art/artworks/turner-riv...
1009 http://www.tate.org.uk/art/artworks/turner-riv...

```

```

[ ]: # axis=0 means regex will apply on index of rows
data.filter(axis=0, regex="^100(0|2|4|6|8)$")

```

```

[ ]:
      id accession_number      artist artistRole \
1000  14704      A01004  Turner, Joseph Mallord William  artist
1002  14706      A01006  Turner, Joseph Mallord William  artist
1004  14708      A01008  Turner, Joseph Mallord William  artist
1006  14710      A01010  Turner, Joseph Mallord William  artist
1008  14712      A01012  Turner, Joseph Mallord William  artist

```

```

      artistId      title dateText \
1000      558      Hedging and Ditching  1812
1002      558      River Wye  1812
1004      558 Chain of Alps from Grenoble to Chamberi  1812
1006      558      Mer de Glace  1812
1008      558      Rivaux Abbey, Yorkshire  1812

```

```

      medium \
1000 Etching and engraving on paper
1002      Print on paper
1004 Etching and engraving on paper
1006 Etching and engraving on paper
1008 Etching and engraving on paper

```

```

      creditLine year \
1000 Presented by A. Acland Allen through the Art F... 1812
1002 Presented by A. Acland Allen through the Art F... 1812
1004 Presented by A. Acland Allen through the Art F... 1812

```

1006 Presented by A. Acland Allen through the Art F... 1812
 1008 Presented by A. Acland Allen through the Art F... 1812

	acquisitionYear	dimensions	width	height	depth	units	\
1000	1925.0	image: 184 x 259 mm	184	259	NaN	mm	
1002	1925.0	image: 183 x 264 mm	183	264	NaN	mm	
1004	1925.0	image: 178 x 259 mm	178	259	NaN	mm	
1006	1925.0	image: 178 x 253 mm	178	253	NaN	mm	
1008	1925.0	image: 182 x 265 mm	182	265	NaN	mm	

	inscription	thumbnailCopyright	\
1000	NaN	NaN	
1002	NaN	NaN	
1004	NaN	NaN	
1006	NaN	NaN	
1008	NaN	NaN	

	thumbnailUrl	\
1000	http://www.tate.org.uk/art/images/work/A/A01/A...	
1002	http://www.tate.org.uk/art/images/work/A/A01/A...	
1004	http://www.tate.org.uk/art/images/work/A/A01/A...	
1006	http://www.tate.org.uk/art/images/work/A/A01/A...	
1008	http://www.tate.org.uk/art/images/work/A/A01/A...	

	url
1000	http://www.tate.org.uk/art/artworks/turner-hed...
1002	http://www.tate.org.uk/art/artworks/turner-riv...
1004	http://www.tate.org.uk/art/artworks/turner-cha...
1006	http://www.tate.org.uk/art/artworks/turner-mer...
1008	http://www.tate.org.uk/art/artworks/turner-riv...

[]: