



Cleaning & Exploring your Data

with Open Refine

Today

- A word about me
- Very short introduction
- Then we get down to putting Open Refine to use
- Working through a generally plausible example
- Goal: Find out more about historic police stations in NSW
- Start with basic set of data from OEH, then use Google Geolocation API, then State Records NSW API
- Not intended to be thorough research!

Open Refine

- Sometimes described as Excel on steroids
- Kind of true
 - Exploring datasets
 - Cleaning up datasets
- Most datasets are messy
 - Variant spellings – Sydney, Sidney
 - Different number formats – “1000”, “1,000”, “1,000.00”, “1.000,00”
 - Myriad of date formats
 - Compound fields – “Sydney, NSW”

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- Typical workflow:
 1. Import dataset – CSV, tab – file, URL
 2. Rearrange, split, sort
 3. Explore data using facets
 4. Use cluster analysis to make consistent
 5. Supplement with an API call
 6. Repeat 2-5
 7. Export dataset

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- Faceting:
 - Grouping the dataset based on one or more parameters, properties, fields, columns
 - Like tagging
 - You can then explore just those records at the intersection of the facets
 - A “suburb” facet, for instance, would group all records that have the same suburb
 - Possible to facet on text, number ranges, pairs of numbers, etc.

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- Clustering
 - Often faceting will reveal inconsistencies in the data
 - Cluster analysis attempts to form clusters of data based on certain algorithms
 - Open Refine allows you try a variety of clustering methods
 - These are quite good at revealing inconsistencies, e.g.:
 - **10-12 Church St.** vs **10,12 Church Street**

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- APIs
 - Increasingly, APIs are being used to expose services – databases, registries, mapping services, etc.
 - Open Refine makes it relatively straightforward to call into an API, receive a response, and supplement your dataset with a portion of it.

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Let's have a go!

Get the slides, exercises and required dataset at:

<http://www.intersect.org.au/course-resources>

Thanks for attending!

- Please complete our **course survey** at:
 - <http://svy.mk/18c8dHa>

Any **further questions**, contact us at

- training@intersect.org.au
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