



Curtin University

THICKSHAKE

TOWARDS A SMARTER LIBRARY CATALOGUE

Mark Shelton | Curtin HIVE | 18 March 2018

github.com/markshelton/thickshake

Project sponsored by the Pawsey Supercomputing Centre.

Catalogue Interface

Location Extraction → OldPerth

Face Detection → Subject Recognition

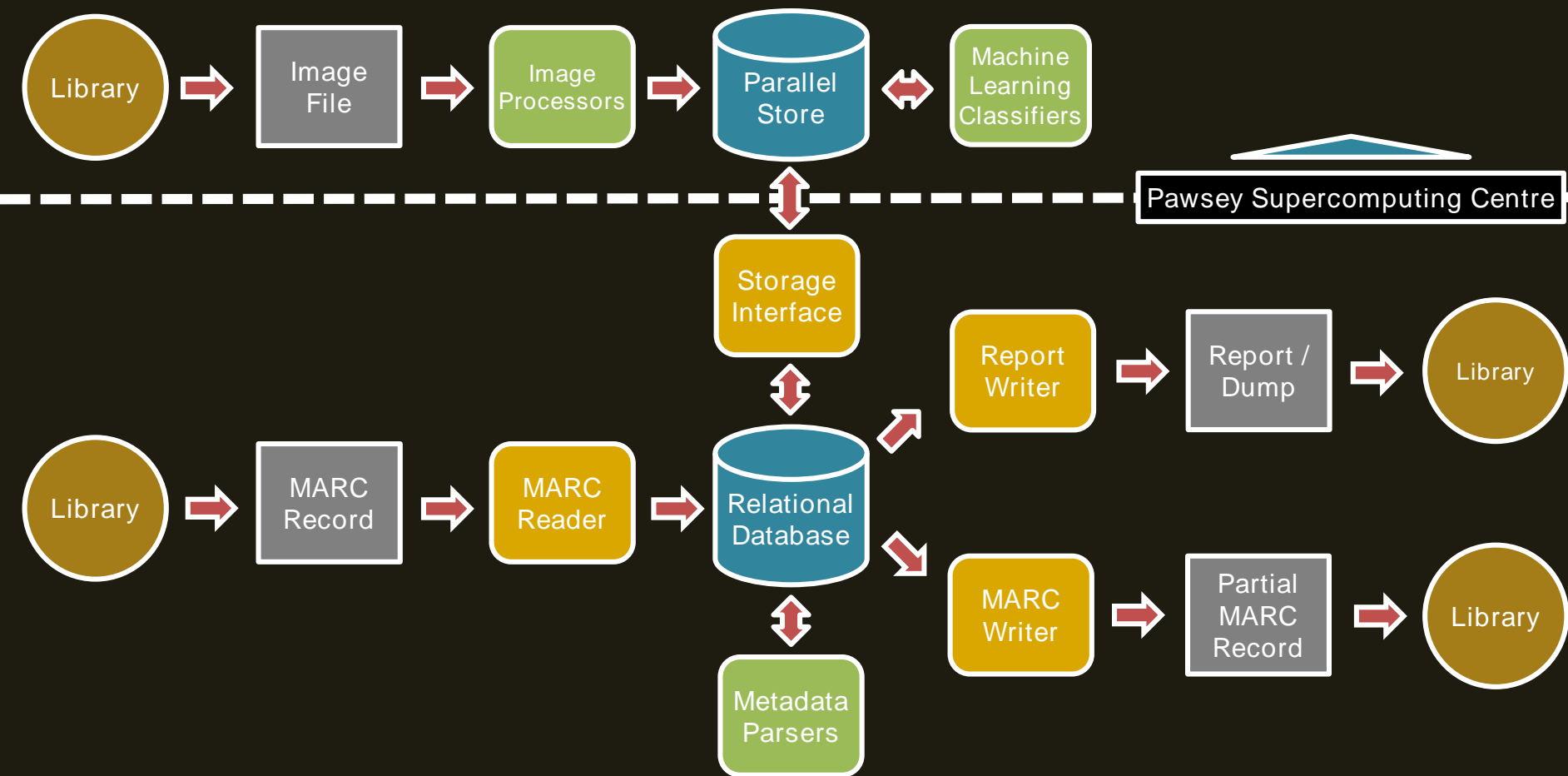
Text Detection → Text Recognition

Landmark Recognition

Image Captioning

Clustering | Similarity | Search

Catalogue Interface



Location Extraction

Catalogue Field

311688PD: Durham House building premises of Wrightson Dance Studios, The Inn Trim hairdressers, Galore House (no. 842) and Marjorie Young Antiques (no. 836) Hay Street, Perth, December 1982



Address

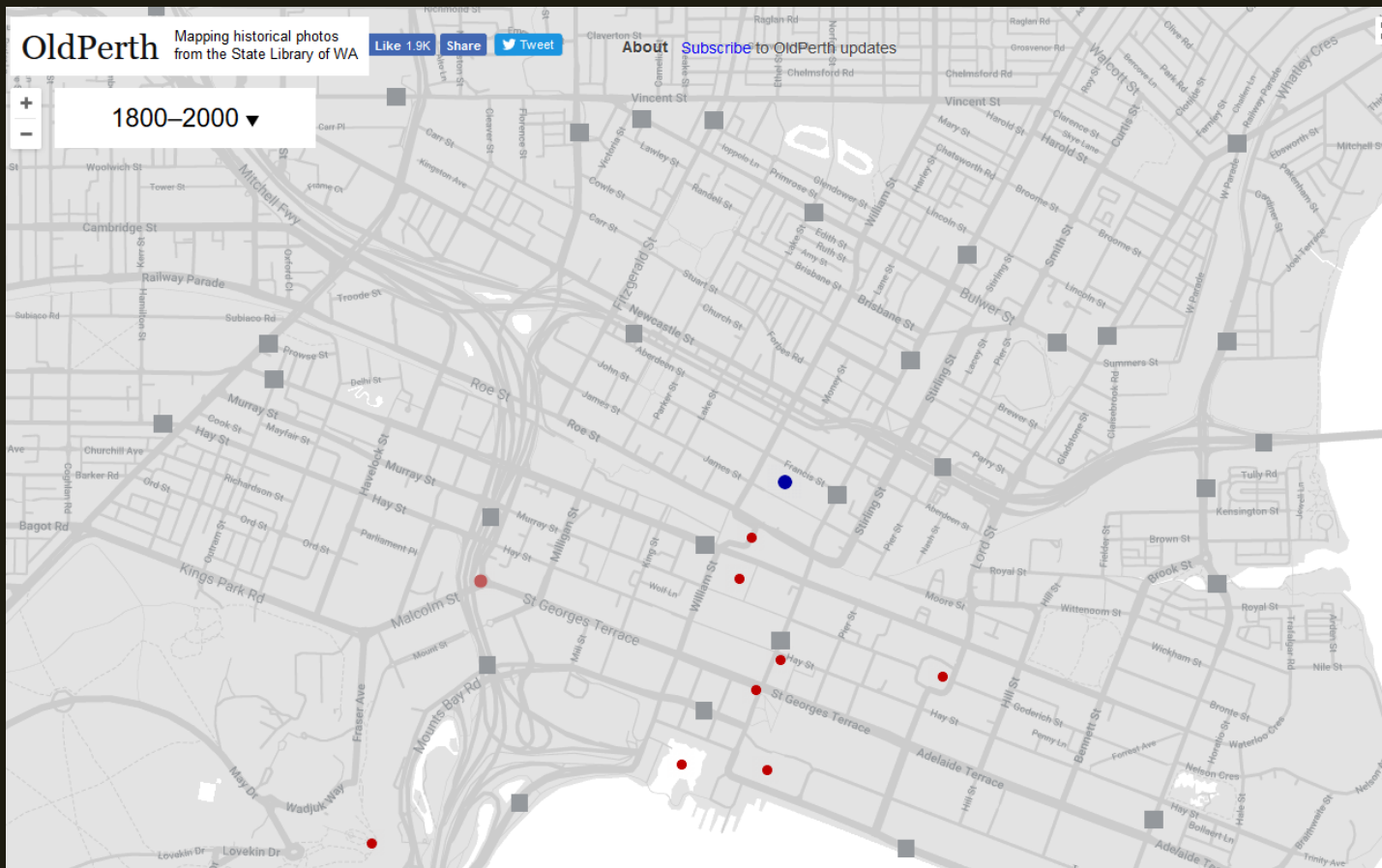
building_name: Durham House
street_number: '836-842'
street_name: 'Hay'
street_type: 'Street'
suburb: 'Perth'
state: 'WA'



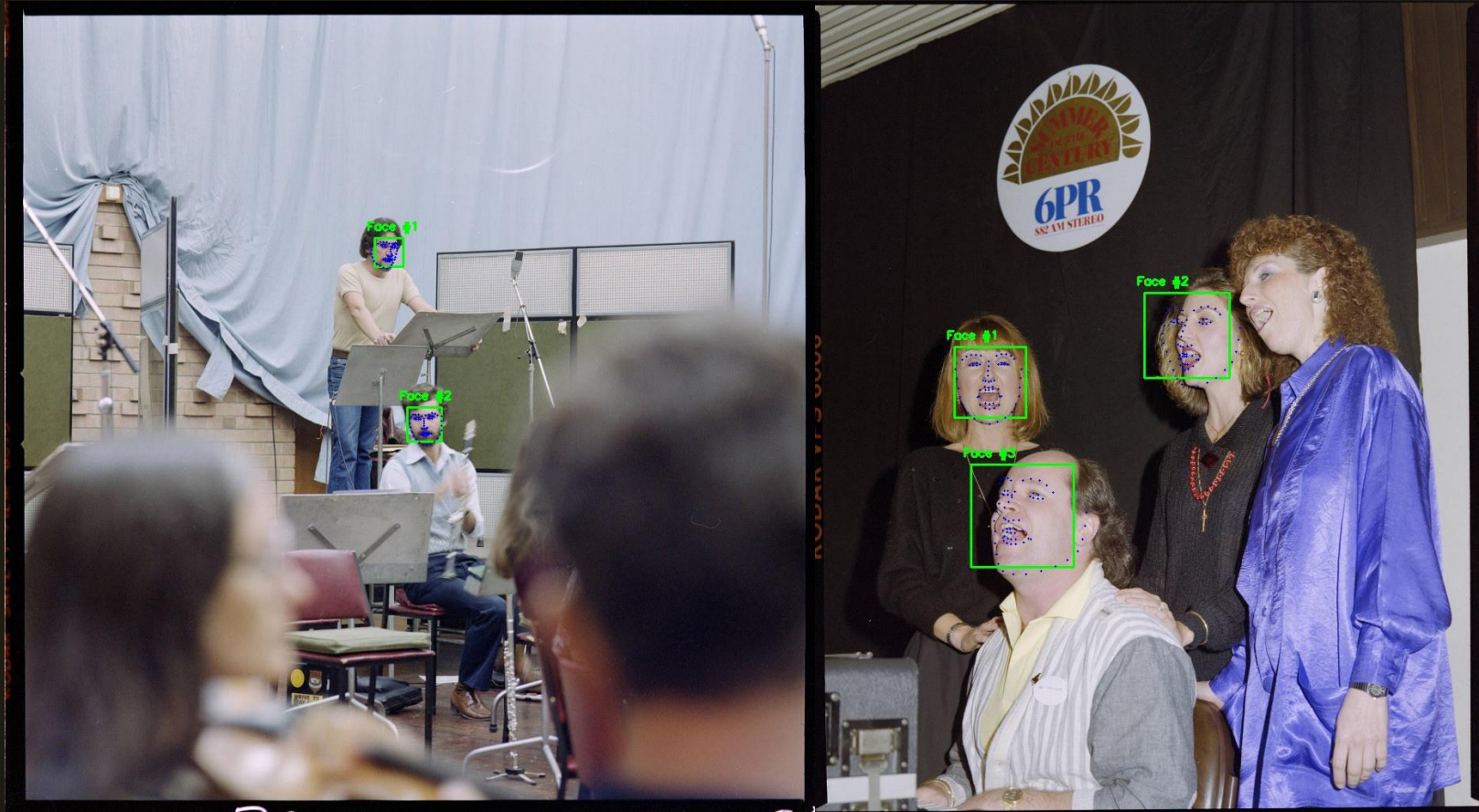
Location

longitude: 115.85448
latitude: -31.95236,

Location Extraction → OldPerth

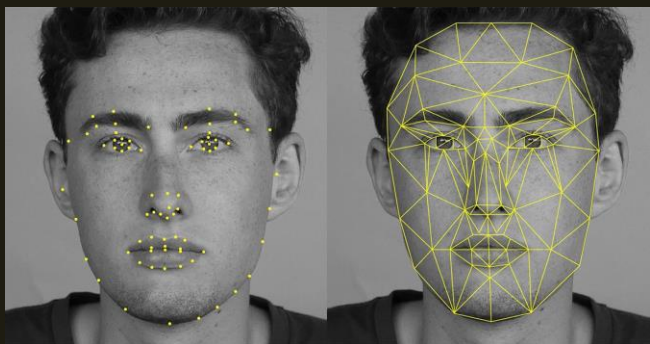


Face Detection



Face Detection → Subject Recognition

Facial Embeddings “Fingerprint”



Existing Labels

Have we seen
this person in
other photos?

Other Clues

What do we know
about the image?

- Location
- Dates
- Topics
- Other Subjects

Text Detection



Text Detection → Text Recognition

		
Department	Fabulous	EXPECTATIONS
		
wBog TOILET	2b3RpQQ SADASHIVA NAGAR	EXIT

Landmark Recognition



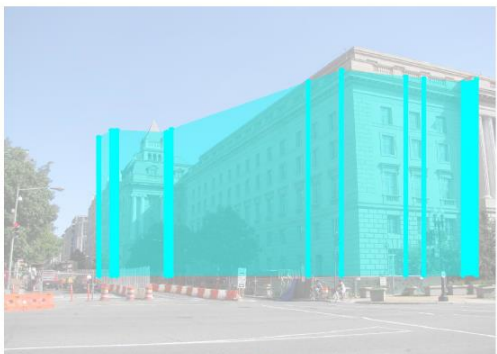
(a)



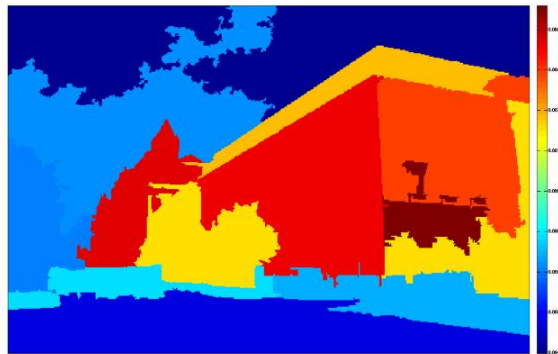
(b)



(c)



(d)



(e)

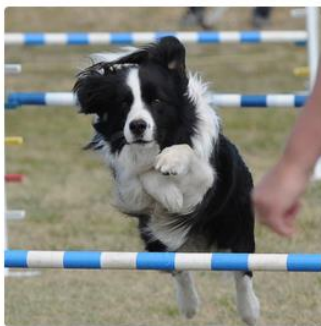


(f)

Image Captioning



"girl in pink dress is jumping in air."



"black and white dog jumps over bar."



"young girl in pink shirt is swinging on swing."



"man in blue wetsuit is surfing on wave."



"little girl is eating piece of cake."



"baseball player is throwing ball in game."



"woman is holding bunch of bananas."



"black cat is sitting on top of suitcase."

What images depict similar **topics**?

What images have a similar **aesthetic**?

What images were taken around the same **location**?

What images were taken around the same **time**?

What images depict this **person**?

What images depict this **landmark**?

...

Which people are related to this **person**?

Which images in the catalogue are most **important**?

Catalogue Interface

Location Extraction → OldPerth

Face Detection → Subject Recognition

Text Detection → Text Recognition

Landmark Recognition

Image Captioning

Clustering | Similarity | Search



Curtin University

THICKSHAKE

TOWARDS A SMARTER LIBRARY CATALOGUE

Mark Shelton | Curtin HIVE | 18 March 2018

github.com/markshelton/thickshake

Project sponsored by the Pawsey Supercomputing Centre.