#### Introduction to locality sensitive hashing

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Slides available at http://bit.ly/cimat-lsh

#### Goal and outline

### Finding similar items

### Jaccard similarity

# Shingling

shingling and Jaccard similarity by hand

Useful packages/functions in R

### Example data

shinging and Jaccard similarity with  $\ensuremath{\mathsf{R}}$ 

### Hashing

Why do it?

### Similarity preserving summaries of sets

#### Characteristic matrix

# Minhashing

## LSH (avoid pairwise comparisons)

### Banding and buckets

banding in  ${\sf R}$ 

### Putting it all together

"Easy" LSH in R

#### **Evaluation**

perform LSH and evaluate how we did