Visual Analytics Macroscope|VISAM
The Birth of History - Assessing the Role of Fiction in the Historical Paradigm

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class Person(object):
    def __init__(self, name):
        self.name = name
    def says_hello(self):
        print 'Hello, my name is', self.name

class Researcher(Person):
    def __init__(self, title=None, areas=None, **kwargs):
        super(Researcher, self).__init__(**kwargs)
        self.title = title
        self.areas = areas

KLN = Researcher(name = 'Kristoffer L Nielbo',
                 title = 'Associate professor',
                 areas = ['Humanities Computing', 'Culture Analytics', 'eScience'])
KLN.says_hello()
VISAM | Front end
VISAM|Back end
VISAM Methods

Core
- time series analysis - evolution of cultural concepts during 1550-1650
- long-range dependencies - what concepts prevail throughout the period
- novelty detection – what concepts show disruptive dynamics during the period

Seedlist Query
- domain experts (you) generate seedlists containing important keywords
- seedlists are expanded to synsets using dictionaries and algorithmic methods

Word-level Analysis
- Dynamic Bernoulli Embeddings to create dense vector representations of words
- capture semantic properties as they evolve over time

Document-level Analysis
- Guided Latent Dirichlet Allocation (“structured topic model”) to create dense vector representations of documents
- measure document to document divergence to build topicality evolution
Novelty Detection | Simulation

Baseline

Result

Mean

Variance
Novelty Detection | LDA
THANK YOU

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