

# Clustering by Low-Rank Doubly Stochastic Matrix Decomposition (Supplemental Document)

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## 1 Data Sources

- *Amazon* abbreviates the *AmazonBinary* dataset in Chen's collection<sup>1</sup>.
- *Iris* is from the UCI machine learning repository <sup>2</sup>.
- *Votes* is from the UCI machine learning repository <sup>2</sup>.
- *ORL* is from the Database of Faces of AT&T<sup>3</sup>.
- *PIE* is from CMU/VASC Image Database<sup>4</sup>.
- *YaleB* is from the Extended Yale Face Database B<sup>5</sup>.
- *COIL20* is from Columbia University Image Library<sup>6</sup>.
- *Isolet* is from the UCI machine learning repository <sup>2</sup>.
- *Mfeat* is from the UCI machine learning repository <sup>2</sup>.
- *Webkb4* is the 4 Universities Data Set from CMU <sup>7</sup>.
- *7sectors* is from CMU World Wide Knowledge Base project<sup>8</sup>.
- *USPS* is from the UCI machine learning repository <sup>2</sup>.
- *PenDigits* is from the UCI machine learning repository <sup>2</sup>.
- *LetReco* abbreviates the Letter Recognition dataset from the UCI machine learning repository <sup>2</sup>.
- *MNIST* is from the MNIST database<sup>10</sup>.

## 2 External Algorithm Sources

- *1-Spectral Clustering*<sup>11</sup>
- *Interaction Component Model*<sup>12</sup>

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<sup>1</sup><http://idl.ee.washington.edu/SimilarityLearning/>

<sup>2</sup><http://archive.ics.uci.edu/ml/>

<sup>3</sup><http://www.cl.cam.ac.uk/research/dtg/attarchive/facedatabase.html>

<sup>4</sup><http://vasc.ri.cmu.edu/idb/html/face/>

<sup>5</sup><http://vision.ucsd.edu/~leekc/ExtYaleDatabase/ExtYaleB.html>

<sup>6</sup><http://www.cs.columbia.edu/CAVE/software/softlib/coil-20.php>

<sup>7</sup><http://www.cs.cmu.edu/afs/cs.cmu.edu/project/theo-20/www/data/>

<sup>8</sup><http://www.cs.cmu.edu/~webkb/>

<sup>9</sup><http://www.gaussianprocess.org/gpml/data/>

<sup>10</sup><http://yann.lecun.com/exdb/mnist/>

<sup>11</sup><http://www.ml.uni-saarland.de/code/oneSpectralClustering/oneSpectralClustering.html>

<sup>12</sup><http://netpro.r-forge.r-project.org/>