



ARTIFICIAL INTELLIGENCE: KNOWLEDGE REPRESENTATION AND PLANNING [CM0472] - prof. A. TORSELLO

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Assignment 3: Manifold Learning and Graph Kernels

Due date: no limit

Read [this article](#) presenting a way to improve the discriminative power of graph kernels.

Choose one [graph kernel](#) among

- Shortest-path Kernel
- Graphlet Kernel
- Random Walk Kernel
- Weisfeiler-Lehman Kernel

Choose one manifold learning technique among

- Isomap
- Diffusion Maps
- Laplacian Eigenmaps
- Local Linear Embedding

Compare the performance of an SVM trained on the given kernel, with or without the manifold learning step, on the following datasets:

- [PPI](#)
- [Shock](#)

Note: the datasets are contained in Matlab files. The variable G contains a vector of cells, one per graph. The entry am of each cell is the adjacency matrix of the graph. The variable labels, contains the class-labels of each graph.

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[◀ Results Assignment 2](#)

Vai a...



[Wednesday 11/3/2020 ▶](#)

