



TRƯỜNG ĐẠI HỌC KINH TẾ QUỐC DÂN
KHOA TOÁN KINH TẾ

Machine Learning

PART II

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Problem 1

What are the steps of PCA? Give your reason(s) for each step if possible.

Problem 2

What are the limitations of PCA?

Problem 3

Reconstruct PCA.

Problem 4

How to choose the the number of dimensions to reduce when building PCA?

Problem 5

Explain the crowding problem in SNE.

Problem 6

Why do we have to use t-distribution in t-SNE?.

Problem 7

Explain the term 'perplexity' in SNE/t-SNE (hint: read the SNE paper).

Problem 8

Reconstruct the cost function of t-SNE.

Problem 9

After construct the cost function, what do you need to do to ensure the structure of higher dimension representation and the lower dimension representation has the lowest differences?

Problem 10

Should t-SNE be used when constructing models?