Application of Candecomp/PARAFAC decomposition on AlexNet

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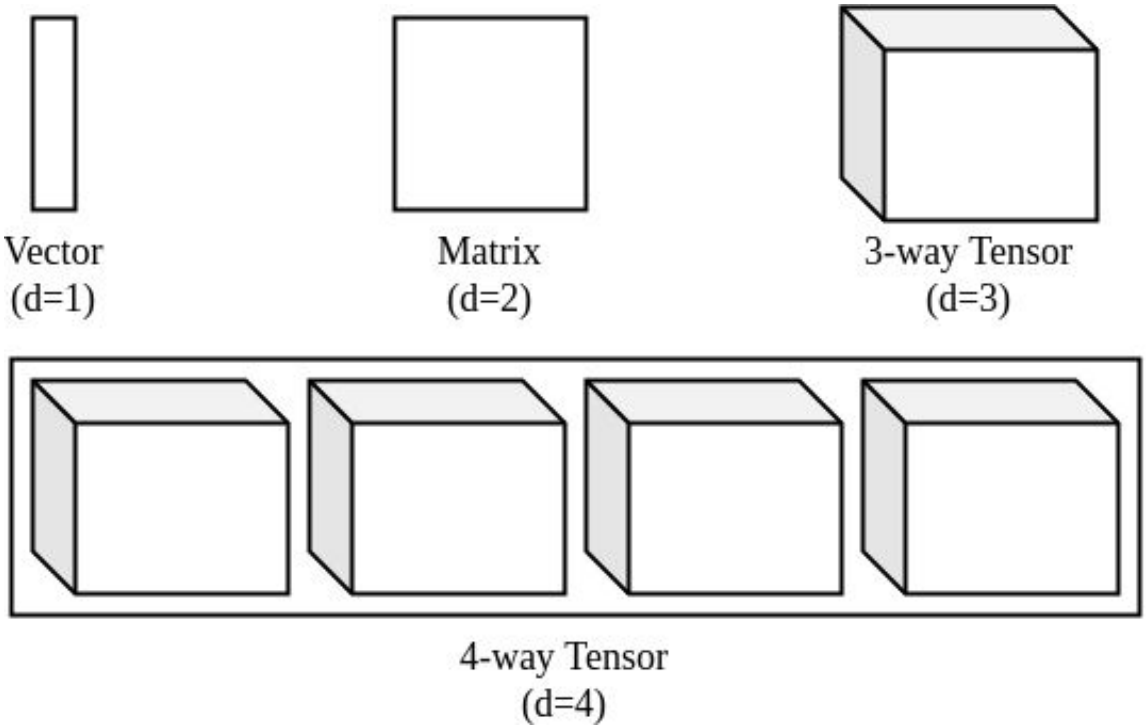
Table of contents:

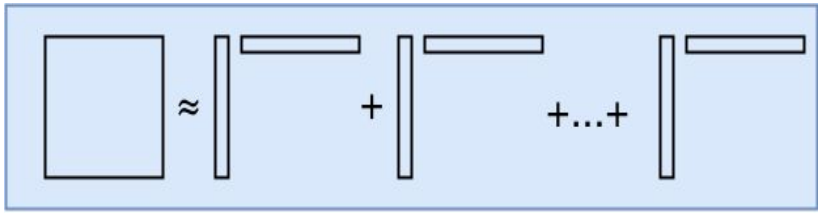
What is a Tensor?

- Tensor is a d-dimensional array

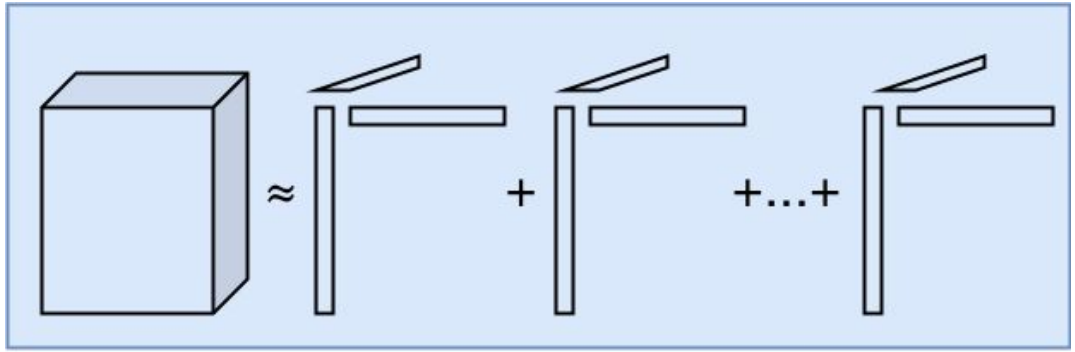


Candecomp/PARAFAC (CP) decomposition:

- CP-decomposition can be viewed as matrix SVD generalized to tensors
- Unlike SVD, no orthogonality constraints are required
- It is defined as sum of d-dimensional outer products



Singular Value Decomposition



CP Decomposition