

Dear authors,

Thank you for revising your chapter and considering our comments/suggestions. We acknowledge and appreciate the edits you have made. However, few points remain to be addressed (hereby referring to "diff Morales 2025 DimensionalityReduction" document with track-changes).

- 1) **Abstract, p.1, l.5:** change "remains" to "remain".
- 2) **Dataset, p.3, l.75:** correct "suchat that" to "such that".
- 3) **SVD, p.5, l.88:** Ref [31] - (Afra and Gildin, 2016) – it appears that in the main text you switched from referring to [31] to referring to [32], however Ref. [31] still appears on the Reference list. Is this reference still being used? If yes, put a place holder in the main text, if not, remove from the list.
- 4) **SVD, p.6, l.117:** Obviously you introduced a new symbol  $\tau$ , as truncation value, to distinguish from rank  $r$ . However, the proportion curve in Figure 3 is still annotated with " $r$ ", which now should be " $\tau$ ", correct? Also, the annotation of both, x- and y-axes should use " $\tau$ " not " $k$ " indexing... I believe after introducing  $\tau$ , as truncation value, the referral should be to " $\tau$  singular values". Please clarify this and make necessary corrections to the annotations and footnotes of Figures 3, 4 and 5.
- 5) **PCA, p.11, l.172:** The index " $k$ " is introduced as the number of leading principal components to perform back transformation. Why in the Example section (p.12, l.181), " $k$ " switches to " $r$ "? Then in the same section (p.12, l.185) " $r$ " reverts to " $k$ ". This appears very confusing and needs to be justified or better, unified. Accordingly, please make necessary corrections to the annotations and footnotes of Figures 8, 9 and 10.
- 6) **DWT, Example, p.17, l.231:** please correct "multi-resoltuion" to "multi-resolution".
- 7) **DWT, Figure 12, p.18:** The x-axis label should not state "Percent", since it's been normalized to 1 (unity). It's better to use "Ratio" or "Proportion" or, simply use " $k$ ".
- 8) **Dictionary Learning, p.21:** Do you mean a "corpus", in the context of large language models? Please elaborate on parallelism. (This request has previously not been addressed).
- 9) **Dictionary Learning, Example, p.22, l.284:** Please rewrite "reconstruct" to "reconstruct it".
- 10) **DWT, Figure 16, p.23:** The x-axis should be labeled as "Number of atoms in the dictionary", not as "SSIM by number of atoms in the dictionary".
- 11) **Appendices:** They should be titled as Appendix A:, Appendix B: etc, not as A, B, ... Please correct.
- 12) **References:** please verify the consistency of the list with reference to [31], as noted in #3) above.