Self evaluation

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We will shortly evaluate to what extent we achieved our learning objectives.

1. Analyze and understand Non-negative Matrix Factorization with Gaussian Process Priors (NMF-GPP) to the degree such that we can derive approximate inference updates, ie. Variational Bayes and MAP estimates
    - We showcase understanding of NMF-GPP in the entirety of section 2 (methods) in the report. Furthermore, we show infeasibility of VB in appendix A and show concrete equations in MAP estimation in appendix B. We conclude that we fully achieved this learning objective.
2. Implement the algorithms derived for NMF-GPP and evaluate these on Raman spectroscopy data, possibly extending to other positive data
    - The implementations of the algorithms are seen in the attached code, and is so not directly included in the report. We test the algorithms on *simulated* Raman spectroscopy data, and thus do technically not test on real-life data – and do not extend to other types of data. However, we showcase our implementations on the simulated data, so we say that we achieved this learning objective to a reasonable extent.
3. If time allows, extend current NMF methods with our own innovations by eg. developing covariance functions for the GP's that are especially suitable for Raman spectroscopy
    - We show that a tweak of the regular Gaussian kernel for GP's to allow for spatial awareness of the covariance improves results. The results are shown in section 3 and the discussion of the covariance is seen in section 2.3. We say that we achieved this learning objective, although we do not believe that we solved the problem for Raman spectroscopy.