

## Week 4 Reading

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October 4, 2016

Reading this chapter, I now understand why the  $m_k(x_i, x_j)$  notation I saw in the previous chapter was used. Chapter 4 also helped me to see the actual link between graphical models and probability but I was hoping for some background explaining the development process of graphical models, especially with respect to the message passing protocol. Factor graphs seems like a logical extension of tree-based graphs with more fine-tuned representation power and the use of 'super-variables' to represent cliques. I learned that both 'sum-product' and 'max-product' are both examples of commutative semiring so I am planning to read up on that. In general, this chapter was much denser than previous chapters hence I definitely would be re-reading it again.