MATH60005/70005: Optimization (Autumn 22-23)
Week 3: Learning Outcomes Checklist

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The idea of this checklist is to help you to self-evaluate your progress and understanding of the subject, and to give you some guidance on where to focus. If you can tick all the boxes it means you're doing alright, otherwise you need to study a bit more, grab a book, watch the videos, or seek help from classmates, or the lecturer. Try to fill as many gaps as quickly as possible.

And remember to make an attempt to solve the problem sheet before our live session!

Learning Outcome	Check
I understand how an overdetermined linear system can be solved as an optimization problem.	
I understand derivation of optimality conditions for LLS.	
I can solve LLS by hand for small systems.	
I understand the relation between LLS and linear regression.	
I understand the role of a regularization parameter.	
I can redo the optimality conditions for Regularized Least Squares.	
I understand the application of RLS to signal denoising.	
I understand that LLS can be extended to nonlinear models	