

Title: Machine learning approaches for bioengineering

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Abstract: In this talk, I will introduce the basic concepts of machine learning, discuss some of the popular ML algorithms, and then present some ML based case studies aimed at deciphering novel biological insights as well as accelerating the bioengineering pipeline. The bioengineering examples presented in the latter part of the talk would be focused on designing synthetic protein sequences with improved properties, mRNA transcripts with better stability, and transcription factors with novel ligand specificities that could be used as intracellular metabolite sensors.