

## 1 Final Proposal

For the Math143 final project, we are proposing to cover the topic of differentiable neural computers or DNCs. DNCs are similar to artificial neural networks in that they excel in sequence learning. However, neural nets fall short in regards to storing time series data over large time intervals due to a lack of external memory. This limits the ability of artificial neural networks to represent complex variables and data structures. On the contrary, DNCs do have the capability to read and write from an external memory. The ability to store inputs and outputs over longer timescales allows the DNC to operate on the data itself and learn how to model the function that has operated on the data.

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