PadhAl: Variants of Gradient Descent

One Fourth Labs

Summary and what next

What have we learned this chapter

- 1. We have seen two new update rules, namely Momentum based gradient descent and Nesterov Accelerated Gradient Descent
- 2. These each mitigate some of the shortcomings of vanilla gradient descent
- 3. MGD allows for faster movement at plateau regions, thereby saving a lot of time/epochs
- 4. However, MGD can be a bit wasteful as it approaches the minima valley and oscillates till it stops
- 5. This flaw was remedied using NAG, whereby the oscillations near the minima valley are drastically reduced
- 6. NAG offers a good improvement to MGD