Assignment 6

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BE CMPN A

Feature	Adam	Adagrad
① Full form	Adaptive moment Estimation	Adaptive gradient Algorithm
② LR adaptation	Adapts learning rate based on 1st & 2nd moment estimate	Based on accumulated, squar gradient.
③ learning rate decay	No drastic decay, remains effict overtime	L.R decreases continues, causes early stop.
④ Suitability for parse data	Handles, sparse gradient. well due to momentum effect.	Struggles due to aggressive learning rate decay
⑤ Computational. Complexity	Slightly higher due to maintaining additional, many always.	lower computational. overhead but. accumulate historical gradient
⑥ Common use cases	Deep learning tasks like CNN, RNN, Transformers	Simple convex optimization problems, less common in deep learning.