Week 15

1 My own work

About ML project, I have sorted out the pipeline of data mining and image classification. I have been skilled in using ML and DL tools.

About OPT project, I chose a topic on visualization of optimization algorithms. This is really a cool work, and I'm still working on it, implementing more algorithms and making it more beautiful.

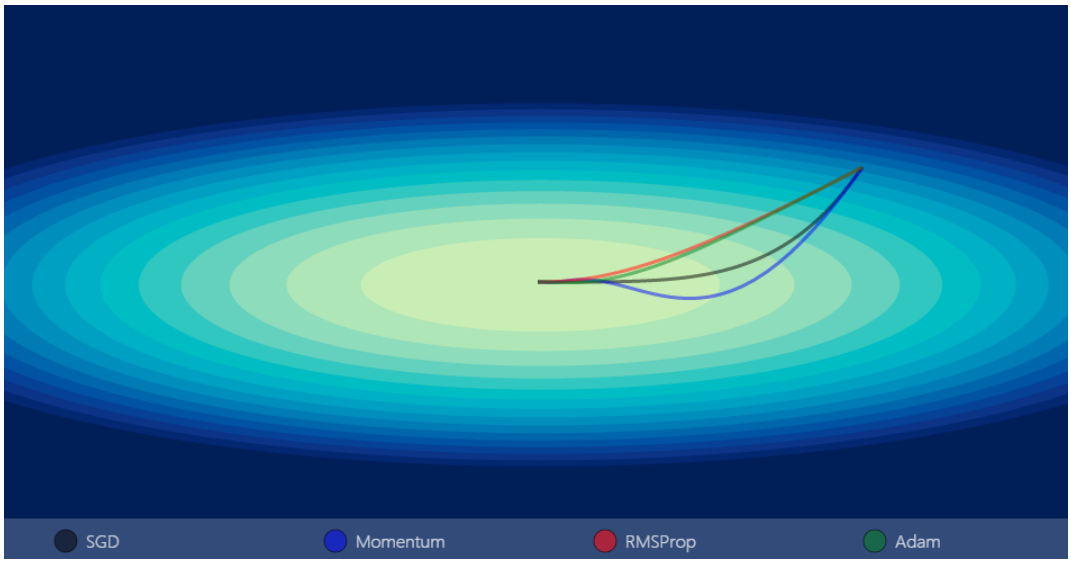

Figure 1: Algorithm Visualization

2 Other work summary

I have read a paper named **Evolutionary Multi-Objective Optimization Driven by Generative Adversarial Networks**.

Target problem: The performance deteriorates rapidly with the increase of the problem scales, driving evolutionary algorithms using machine learning models requires a certain amount of data.

Contribution: it is the first time that the GANs are used for driving evolutionary multi-objective optimization.

Method: They use GANs to help enhance the data by dividing the population into real solutions and fake solutions, where the real solutions are those better-converged. The mutation process is replaced by GAN's generator, while the environmental selection process is replaced by GAN's discriminator.