

Dimensionality reduction techniques

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CodeSeoul ML Meetup
December 10, 2022

Overview

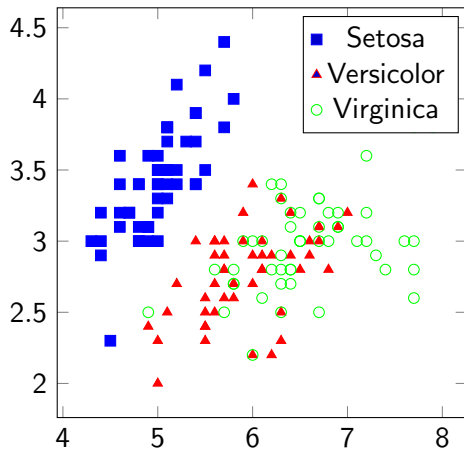
What we'll cover today:

- 1 Motivation
- 2 Algorithms
 - SGD (Stochastic gradient descent)
 - SGD with Momentum
 - AS
- 3 Experiments
- 4 Summary
 - Conclusion
 - Practicum

Motivation

- Relationships between data

What is gradient descent optimization?



Adagrad

Experiment

Experiment

Experiment

Experiment

Conclusion

Thank you for your attention!

- Workshop contents:

<https://github.com/CodeSeoul/machine-learning/tree/master/221210-pca>

- Follow-up QA?

<http://discord.com/users/tuttelikz>

References



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John Duchi, Elad Hazan, and Yoram Singer. “Adaptive subgradient methods for online learning and stochastic optimization.”. In: *Journal of machine learning research* 12.7 (2011).



Sebastian Ruder. “An overview of gradient descent optimization algorithms”. In: *arXiv preprint arXiv:1609.04747* (2016).



Mykola Novik. *torch-optimizer – collection of optimization algorithms for PyTorch*. Version 1.0.1. Jan. 2020.