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Deep Learning with Evolutionary Algorithms

The presentation discusses the application of evolutionary algorithms to
deep learning. It shortly introduces the topic of deep learning, before discussing
common approaches to training "deep" neural networks. It then compares these training algorithms with
Evolutionary Algorithms as a means of powerful, large-scale minimization
applied to neural networks and identifies fields of opportunity as well as difficulties. compared to standard
algorithms. The presentation is based on experiences made with the Geneva (Grid-enabled evolutionary algorithms) toolkit. Geneva implements Evolutionary Algorithms, Swarm Algorithms, Simulated Annealing and
Gradient Descents with configurable backends ranging from GPGPU to large scale HPC clusters.

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Track Classification: Big Data & Data Management