Introduction to Machine Learning Applications

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Model optimization

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Model optimization

- Option 1: Solve for the values that minimize the error term (possible in linear regression or simple models) by taking derivative

  Option 1 is not possible for many models

- Option 2: Minimize the error term (loss function) through an algorithm (typically gradient descent or some variation).

Minimize error

- Most use some variation of gradient descent to minimize error
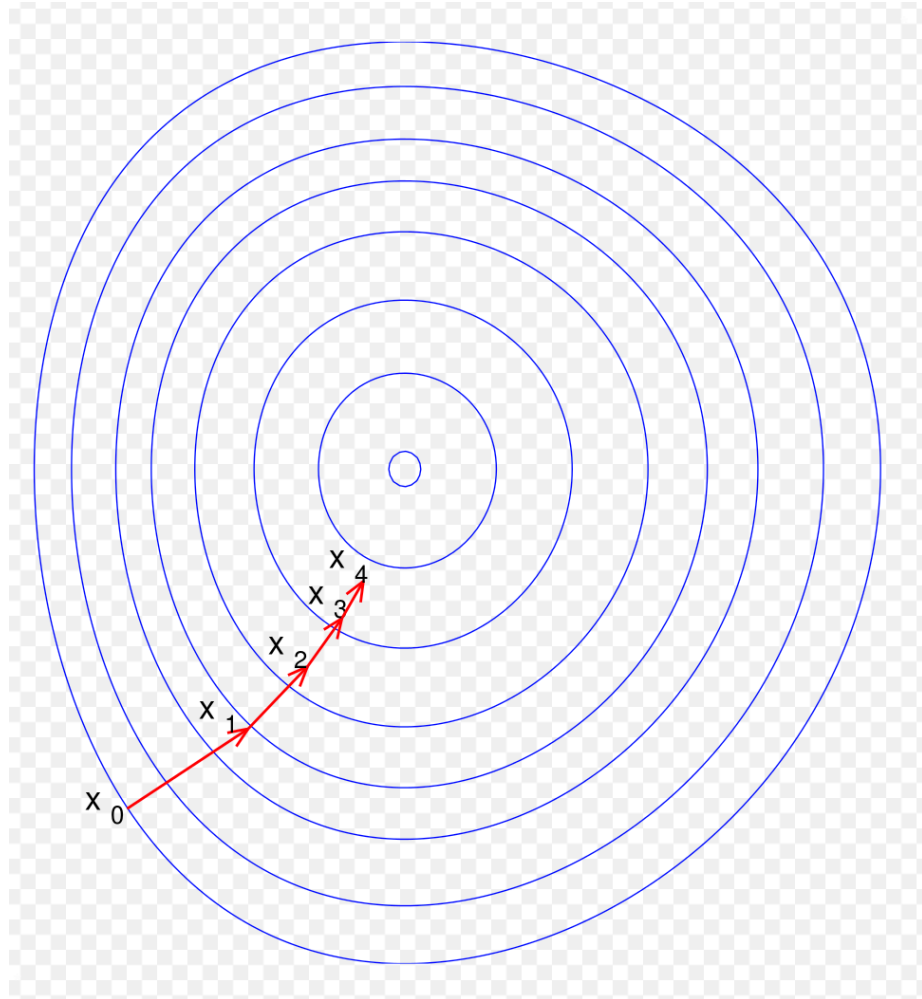
"**Gradient descent** is a first-order iterative optimization algorithm for finding the minimum of a function. To find a local minimum of a function using gradient descent, one takes steps proportional to the *negative* of the gradient (or of the approximate gradient) of the function at the current point." - Wikipedia

XOR model example