

# Gradient Descent

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## Overview

Gradient descent is a tool used to minimize error between some function and actual data. We use gradient descent to dynamically modify our function until we reach a line of best fit. After several iterations, the function will approximate future data points, allowing us to make predictions.

The error function  $\sum_0^n \sqrt{(d(x_i) - f(x_i))^2}$  gives us the sum of squares of error for each point in the data set vs our predictive function  $f(x)$ .