

# Machine Learning

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## Announcements

Prediction

# Regression

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## Regression

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(Demo)

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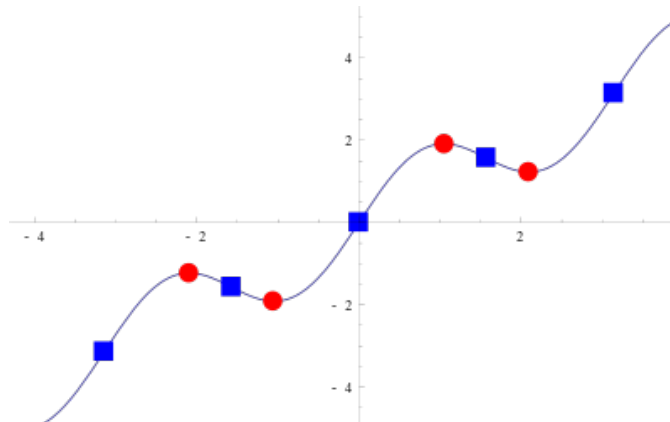
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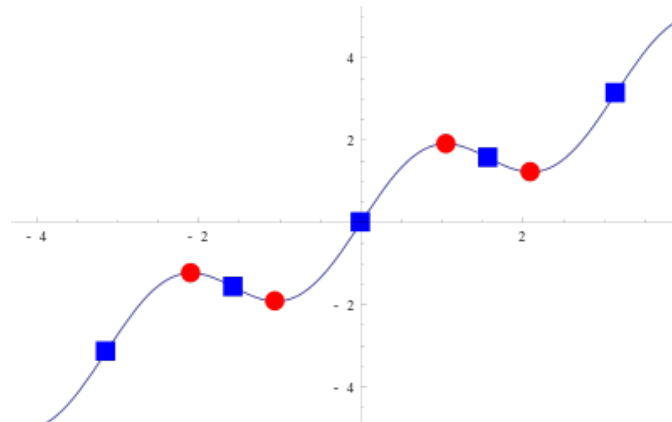
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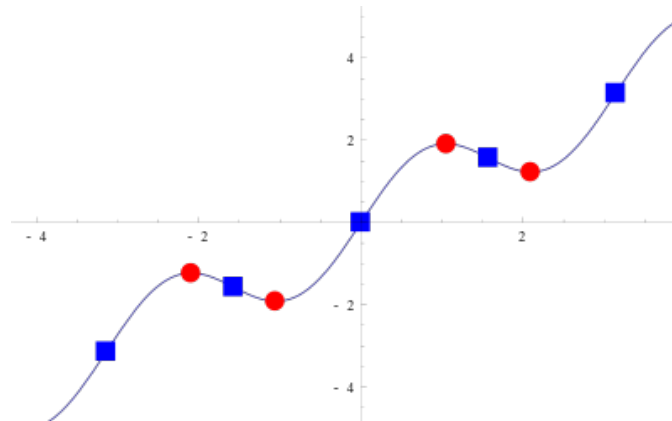


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A linear function has the form  $\mathbf{w} \cdot \mathbf{x}_s + b$  for vectors  $\mathbf{w}$  and  $\mathbf{x}_s$  and scalar  $b$

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Note: Root mean squared error can be optimized through linear algebra alone, but numerical optimization works for a much larger class of related error measures