Exploring parameter space

Practice Assignment • 20 min

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English

Your grade: 50%

Your latest: **50%** • Your highest: **50%**

To pass you need at least 40%. We keep your highest score.

Next item

1. In this quiz, we shall see how quantities in machine learning can be represented as vectors. These could be in the form of data itself, or model parameters, and so on. We will begin to explore why framing our problem in this form might be a useful thing to do. **0 / 2 points**

The problem we shall focus on in this exercise is the distribution of heights in a population.

Since a vector is just a list of numbers, one of the vectors that we can define relates to data that we measure. That is, in this case, we can record the frequency of people with heights between 150cm and 152.5cm, between 152.5cm and 155cm, and so on. We can define this as the vector $\mathbf{f}$ with components,

$$\mathbf{f} = \begin{bmatrix} f_{150.0-152.5} \\ f_{152.5-155.0} \\ f_{155.0-157.5} \\ f_{157.5-160.0} \\ f_{160.0-162.5} \\ \vdots \end{bmatrix}$$

This vector can also be represented by the histogram,