Chapter 11.2 Example - Prices and Areas of House Sales

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Chapter 11 Simple Linear Regression

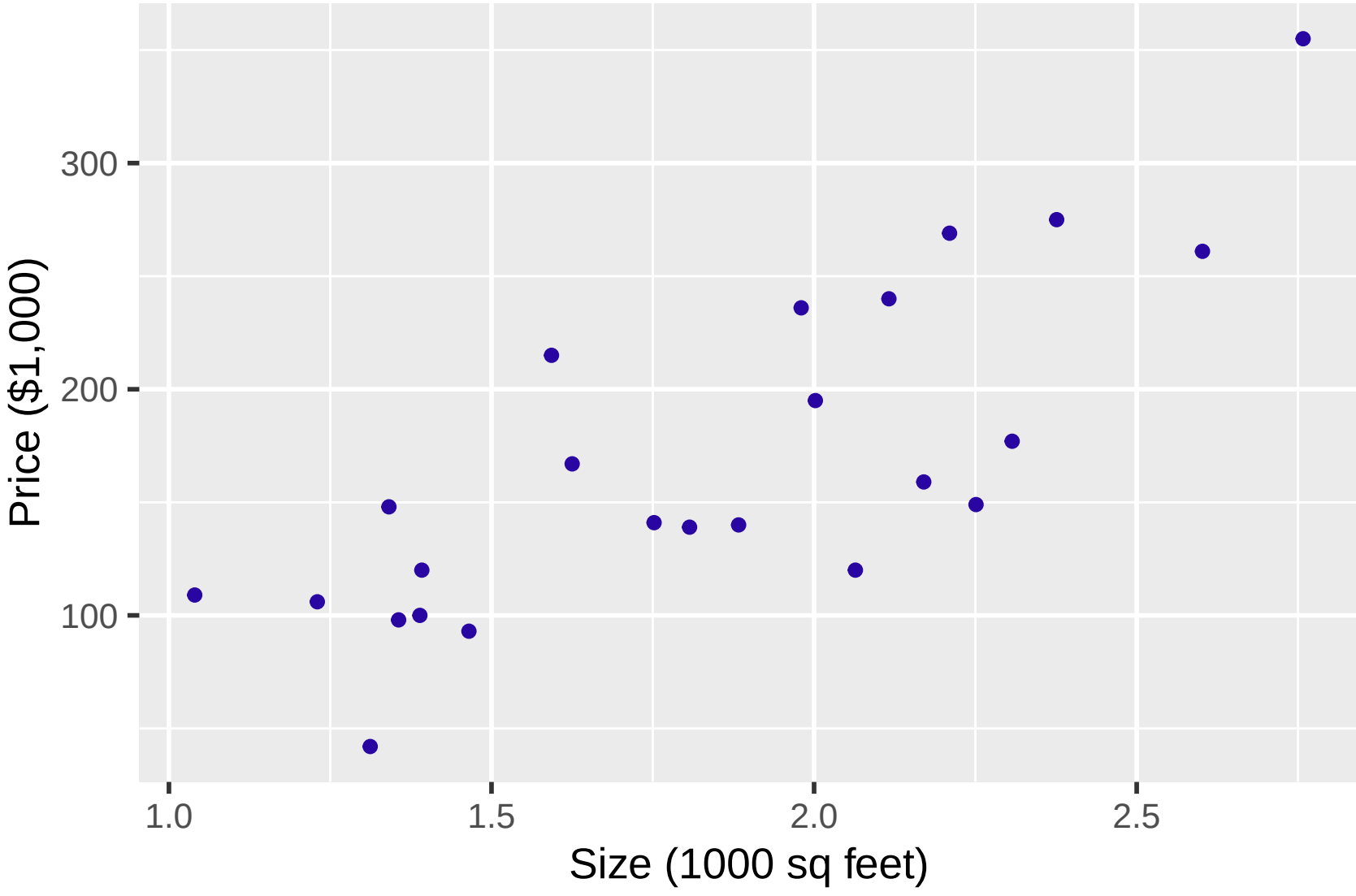
The dataset

- Zillow: an online real estate database company that collects information on 110 million homes across the United States
- Our sample: a random sample of 24 houses for sale in the Findlay, Ohio area during October 2018
- For each house, the dataset contains the selling price (in \$1000) and size (in 1000 square feet)

The dataset cont'd

Index	Price ($1000)	Size (1000 sq feet)
1	167	1.625
2	236	1.980
3	355	2.758
4	148	1.341
5	93	1.465

The dataset cont'd



Some questions

- Suppose one is interested in predicting a house's selling price from its house size
- The scatter plot shows a positive relationship between the size and the price of a house sale, suggesting that the house sale price increases as the house size increases

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- Can one quantify this relationship through a Bayesian linear regression model?
- Is there sufficient evidence that there is a positive association among the population of all homes?
- Can one predict the sale price of a home given its size?