What is Overfitting?

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An Example Dataset

| Age | Number of cars owned | Owns house | Number of children | Marital status | Owns a dog | Bought a boat |
|-----|----------------------|------------|--------------------|----------------|------------|---------------|
| 66 | 1 | yes | 2 | widowed | no | yes |
| 52 | 2 | yes | 3 | married | no | yes |
| 22 | 0 | no | 0 | married | yes | no |
| 25 | 1 | no | 1 | single | no | no |
| 44 | 0 | no | 2 | divorced | yes | no |
| 39 | 1 | yes | 2 | married | yes | no |
| 26 | 1 | no | 2 | single | no | no |
| 40 | 3 | yes | 1 | married | yes | no |
| 53 | 2 | yes | 2 | divorced | no | yes |
| 64 | 2 | yes | 3 | divorced | no | no |
| 58 | 2 | yes | 2 | married | yes | yes |
| 33 | 1 | no | 1 | single | no | no |

• If the customer is older than 45, and has less than 3 children or is not divorced, then they want to buy a boat

Model Complexity vs Accuracy

