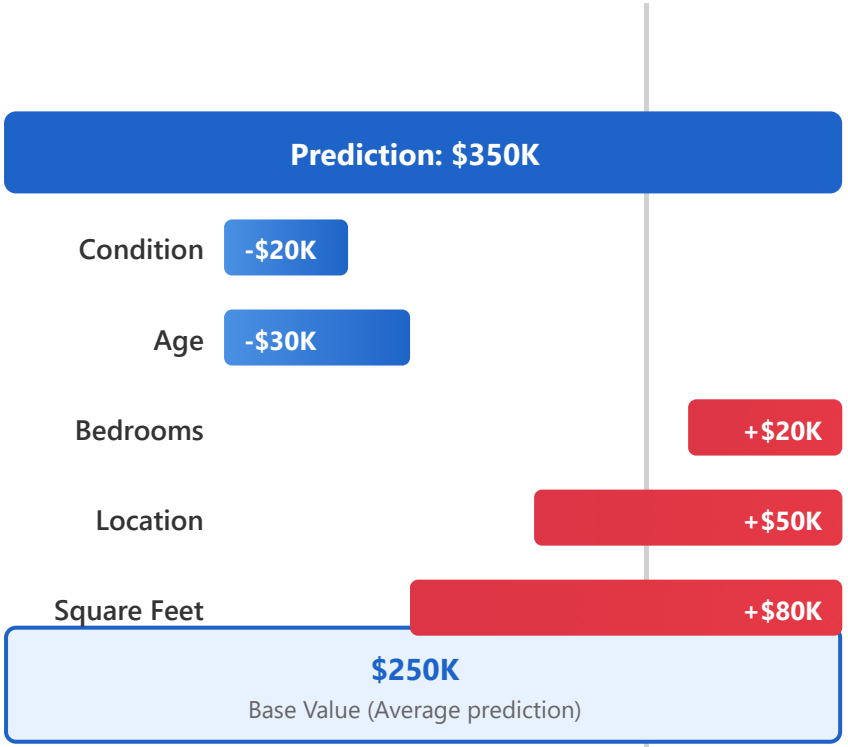
Waterfall Plot: Feature Contribution Breakdown

Visualizing how each feature contributes to a single prediction

Example: House Price Prediction ($350K)



How to Read

→ Start at base value (bottom)

→ Each bar adds/subtracts

→ Red = pushes higher

→ Blue = pushes lower

→ Final value at top

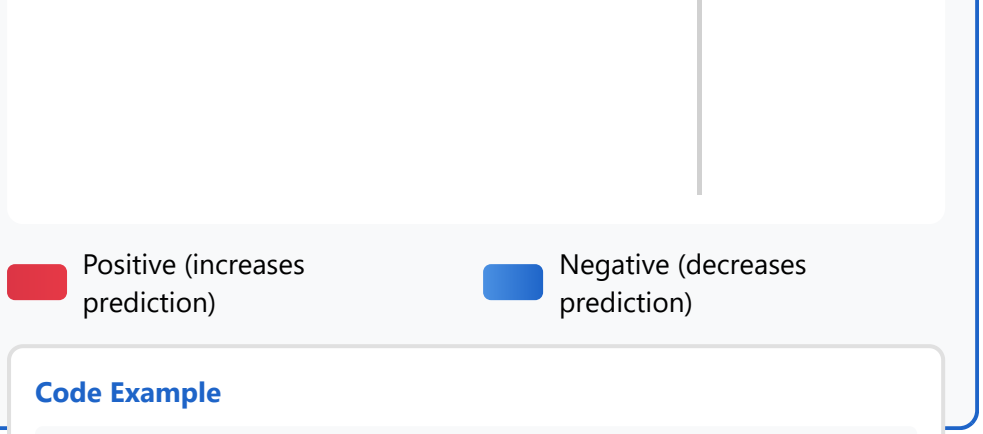
Key Insights

Waterfall plots show the additive nature of SHAP values

→ Base + contributions = prediction

→ Order: by impact magnitude

→ Top 10-15 features shown



Positive (increases prediction)

Negative (decreases prediction)

Code Example

```
import shap
shap.plots.waterfall(shap_values[0])
```

Use Cases

→ Explain individual predictions

→ Identify key drivers

→ Debug model decisions

→ Communicate with stakeholders