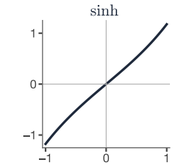
Desert Point — Local Interpretation with Backbone and Tilt

Stage contribution $= 2 \cdot b(x) \cdot \sinh(D(x))$

Backbone $b(x) = b_0 \prod_j b_j(x_j)$ — b_j is the per-feature activation, b_0 the intercept scale

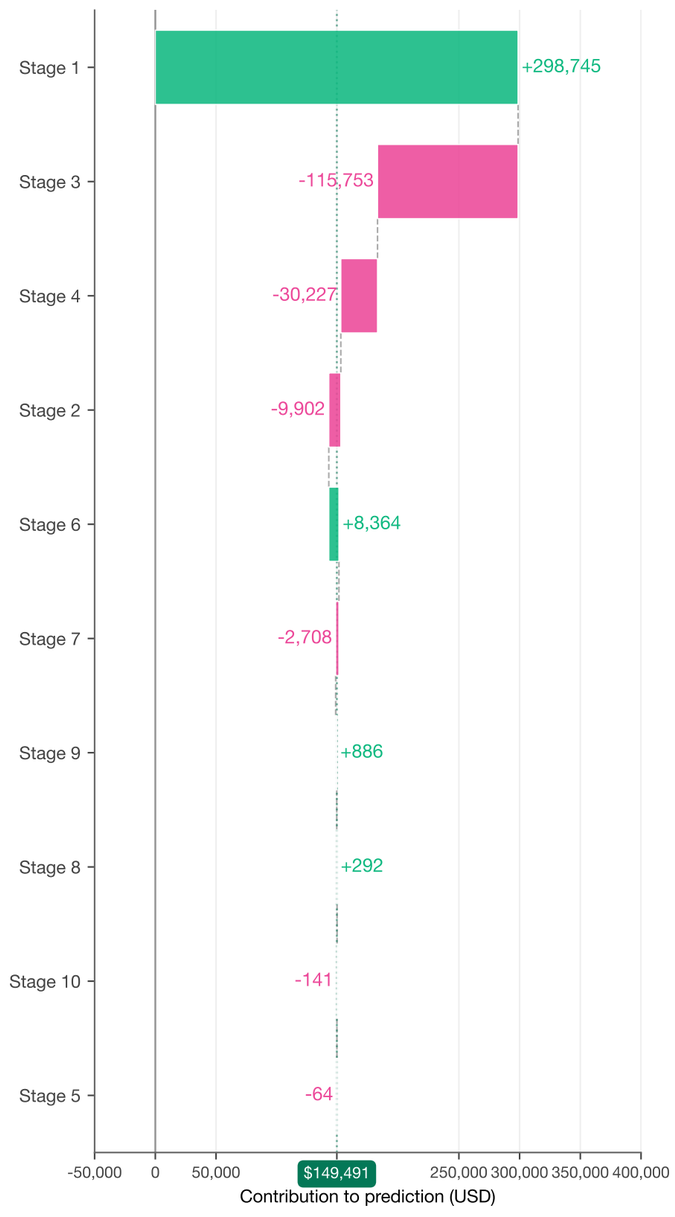
Tilt sum $D(x) = d_0 + \sum_j d_j(x_j)$ — d_j is the per-feature signed local effect, d_0 the intercept tilt



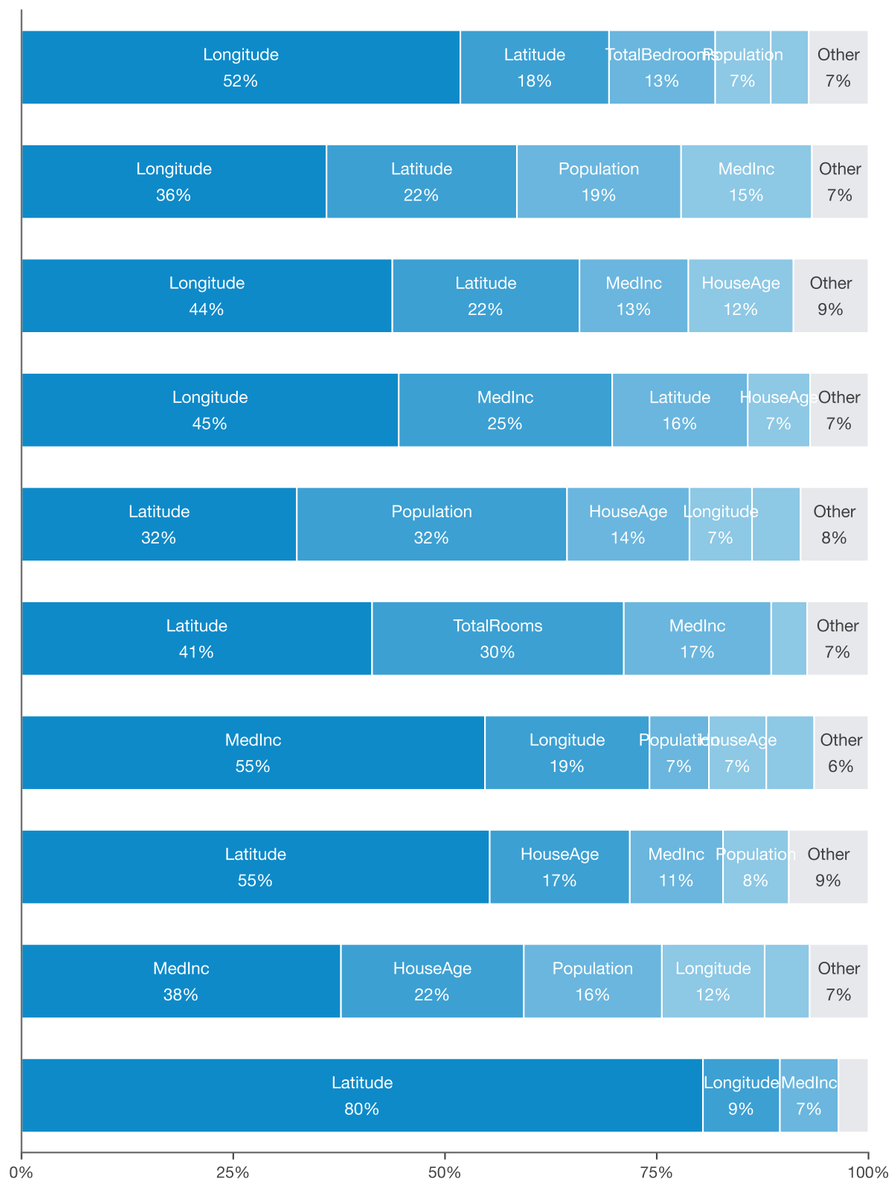
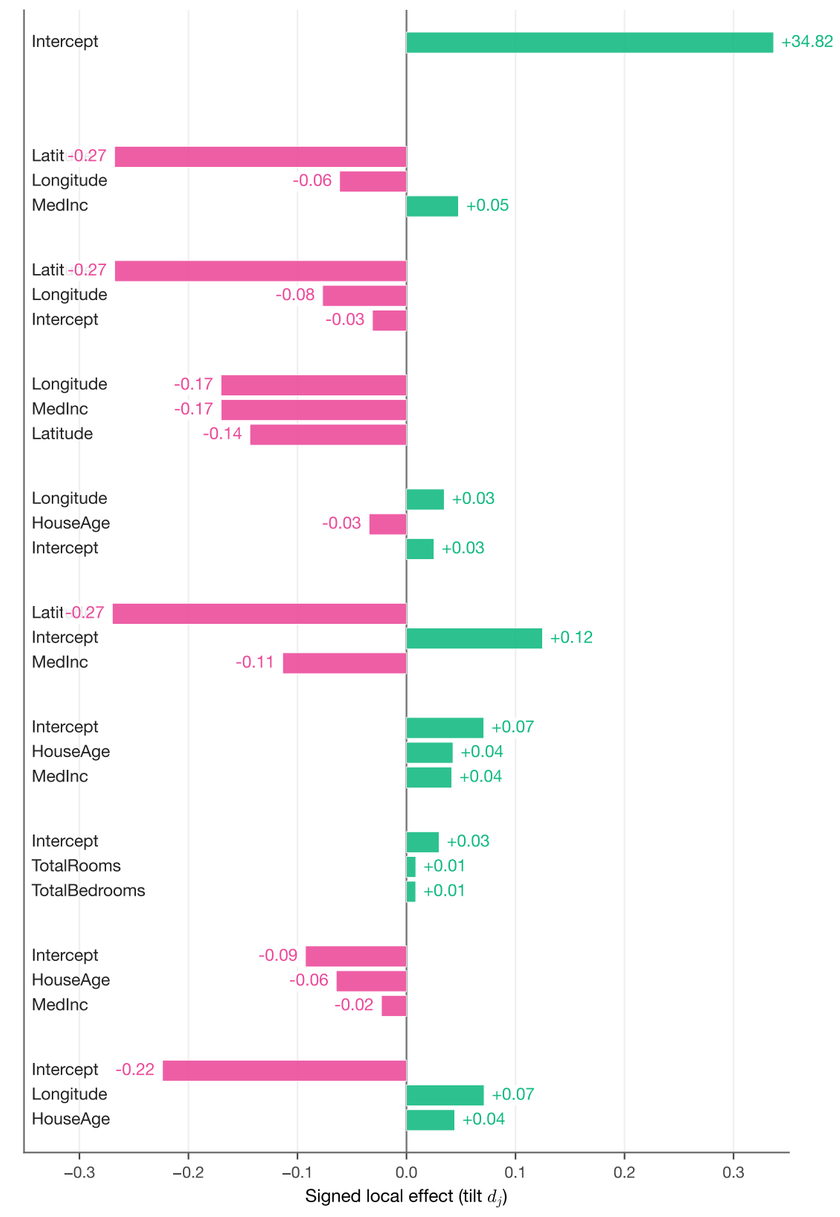
Local point values

Lon: -118.43	Bedrooms: 405
Lat: 37.40	Pop: 1225
Age: 19	Households: 425
Rooms: 2460	MedInc: 4.16

Stage contribution (each bar is one stage's signed prediction)



Relative backbone contribution (each segment represents relative impact on prediction)



Signed tilt (each bar is one feature's signed local effect)