

11/15.

$P(C|DTR)$ No Dependence.

$$\downarrow$$
$$\dots \times P(B|R) \times P(R)$$

ALL VARIABLES CONDITIONALLY
INDEPENDENT OF NONDESCENDENTS

GIVEN PARENTS.

$$P(A|B) = \frac{P(A)}{P(B)}.$$

MODEL EVIDENCE

$C_1, C_2: \text{data}$

$$P(C|E) = \frac{P(E|C_1) \cdot P(C_2)}{P(E)}$$

$$P(C|E) = \frac{P(E|C) \cdot \dots}{\dots}$$

$$P(E|C) = P(C_1, C_2, C_3 | C_1) = P(C_1|C_1) \cdot P(C_2|C_1) \cdot P(C_3|C_1).$$

NAIVE BAYES