KISS n DATA SCIENCE

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Hello…


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We're a data lab…

DATA^3

We help businesses to make more money using data they already have

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EXAMPLE 1 – INSURANCE BUSINESS

CUSTOMER VALUE METRIC

LIFETIME CUSTOMER VALUE

$$EVEB = \frac{P_1 \times (1 - C_1)}{(1 + r)} + \frac{R_1 \times P_2 \times (1 - C_2)}{(1 + r)^2} + \frac{R_2 \times P_3 \times (1 - C_3)}{(1 + r)^3}$$

where EVEB = Expected Value of Existing Business
P_i = profit at time i = Premium – E(Loss) – Expense
C_i = probability of cancellation during period i
R_i = Probability of renewal at the end of the period i
r = discount rate

The value of a customer in an insurance institution may be computed using the formula below

$$CLV_i = -AC_i + \sum_{t}^{r}\left(r_{ti} \times \frac{(AR_{ti} + UR_{ti} + CR_{ti} + RV_{ti}) - (SC_{ti} + MC_{ti})}{(1+d)^t} - r_{ti}^{t-1} \times (1 - r_{ti}) \times \frac{TC_i}{(1+d)^t} + r_{ti}^{t} \times \left\{ \frac{InfoV_{ti} + CoopV_{ti} + InnoV_{ti}}{(1+d)^t} \right\} \right)$$

where:
CLV – value of insurer's customer i (net current value of future earnings generated by that customer), AC – insurer's cost to acquire customer i, r – retention rate of customer i in period t, AR – basic revenue generated by customer i in period t, UR – up-selling revenue generated by customer i in period t, CR – insurer's cross-selling revenue generated by customer i in period t, RV – referral value produced by customer i in period t, MC – insurer's marketing costs to retain customer i in period t, SC – costs of sales of products and of service provided to customer i in period t, TC – costs of terminating an insurer's co-operation with customer i in period t, InfoV – value of information an insurer receives from customer i in period t, CoopV – value of an insurer's cooperation with customer i in period t, InnoV – value of innovations proposed by customer i in period t, d – discount rate, T – number of periods considered (years).

$$\frac{\text{TOTAL PREMIUMS PAID} - \text{TOTAL COSTS \& CLAIMS}}{\text{NUMBER OF YEARS AS A CUSTOMER}} = \text{CUSTOMER VALUE PER CUSTOMER}$$

TOTAL PREMIUMS PAID – TOTAL COSTS & CLAIMS	=	CUSTOMER VALUE
NUMBER OF YEARS AS A CUSTOMER		PER CUSTOMER

EXAMPLE 2 – RIDE HAILING BUSINESS

CUSTOMER VALUE METRIC

LIFETIME CUSTOMER VALUE

Annual Margin per Customer (m): the profit we will make on a sale after accounting for variable expenses (as opposed to just revenue)

Customer Retention Rate (r): the percentage of customers who continue to purchase in a subsequent year

Rate of Discount (i): the interest rate used to discount the value of future cash flows

$$LTV = m\left(\frac{r}{1+i-r}\right)$$

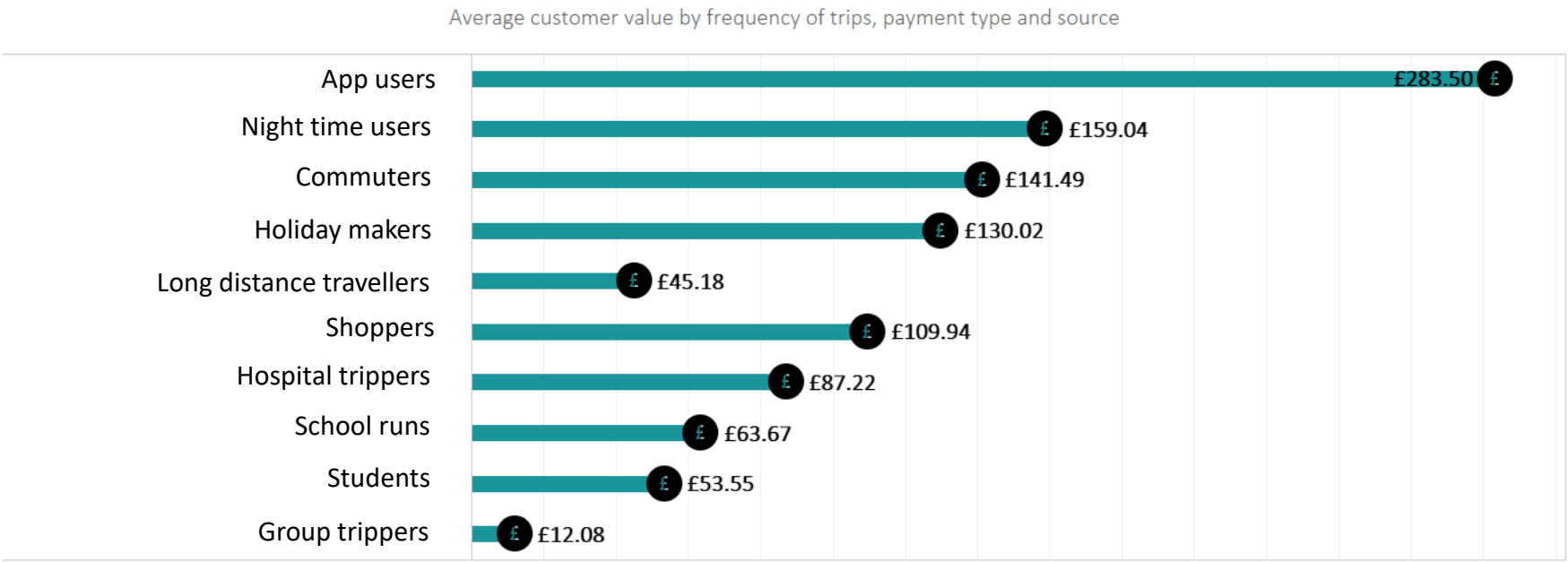
Average Revenue per Conversion x **Repeat Rate per Consumer** = **LIFETIME VALUE OF CONSUMER**

TOTAL FARES x NUMBER OF FARES = CUSTOMER VALUE PER PASSENGER

CUSTOMER VALUE PER DRIVER

TOTAL FARES x NUMBER OF FARES = CUSTOMER VALUE PER PASSENGER

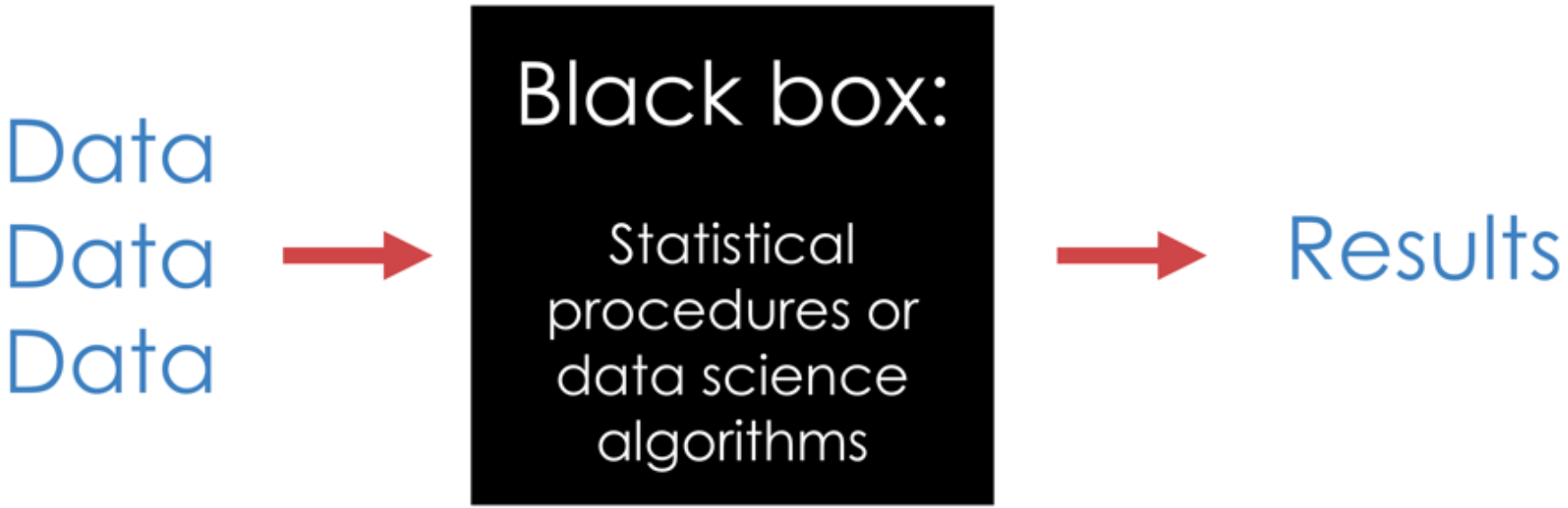
CUSTOMER VALUE PER DRIVER



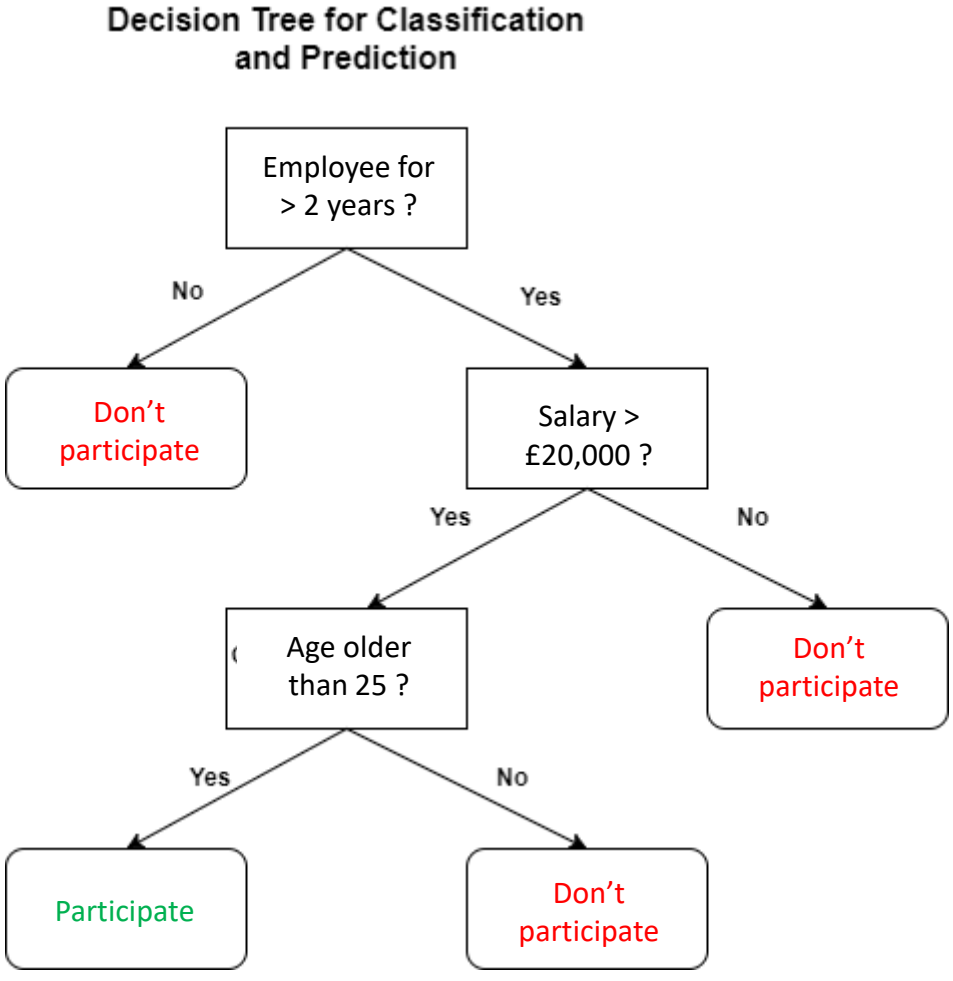
EXAMPLE 3 – EMPLOYEE BENEFITS BUSINESS

PREDICTIVE MODELS

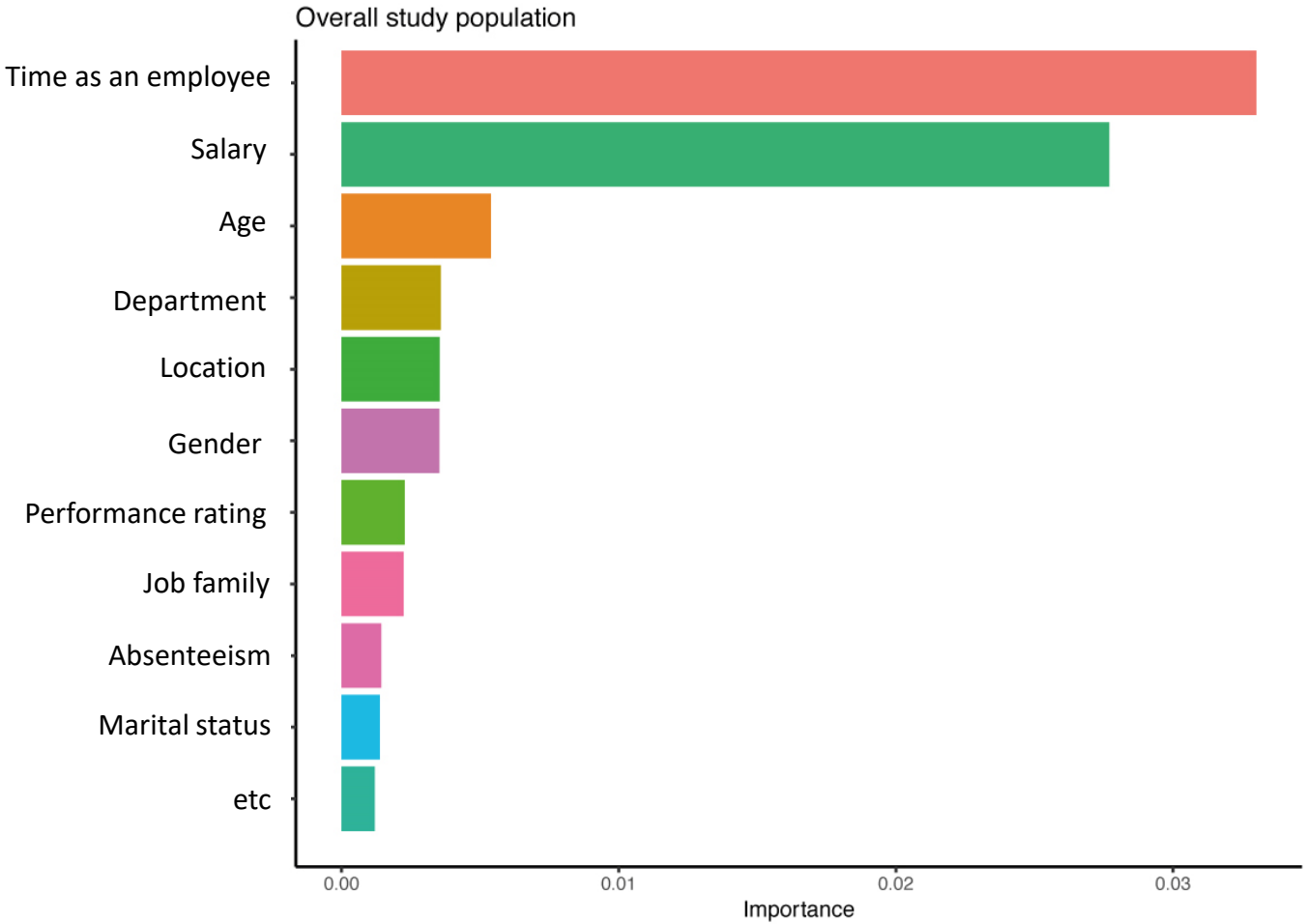
PREDICTING EMPLOYEE BENEFIT PARTICIPATION



PREDICTING EMPLOYEE BENEFIT PARTICIPATION



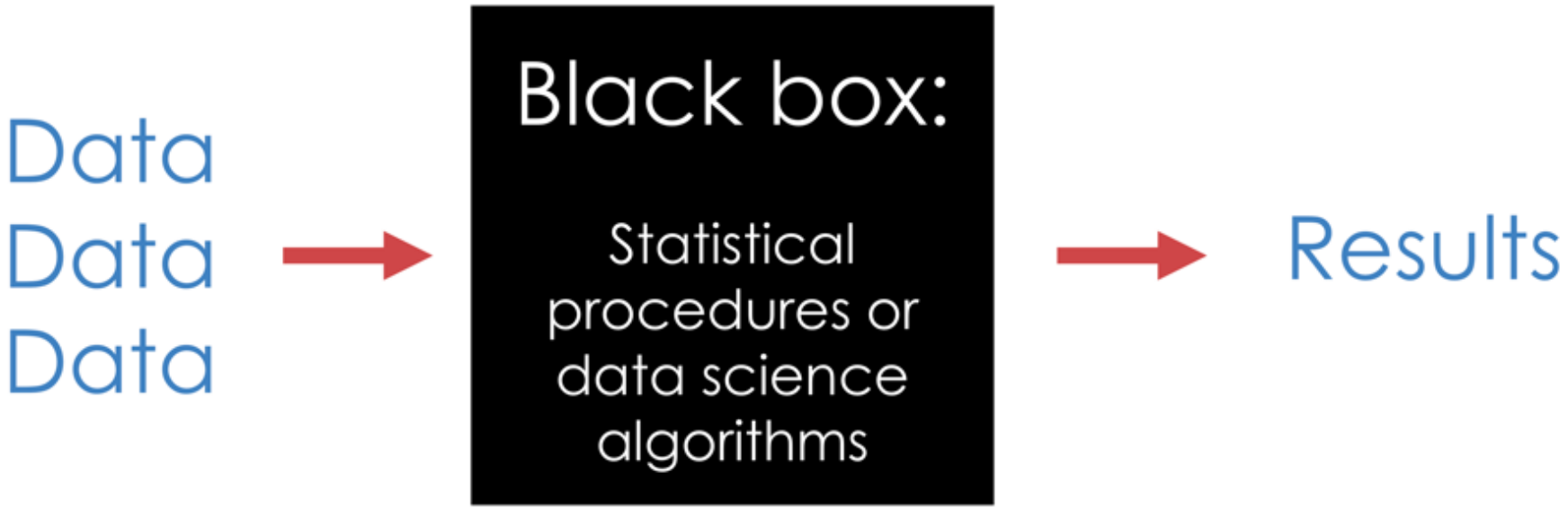
PREDICTING EMPLOYEE BENEFIT PARTICIPATION



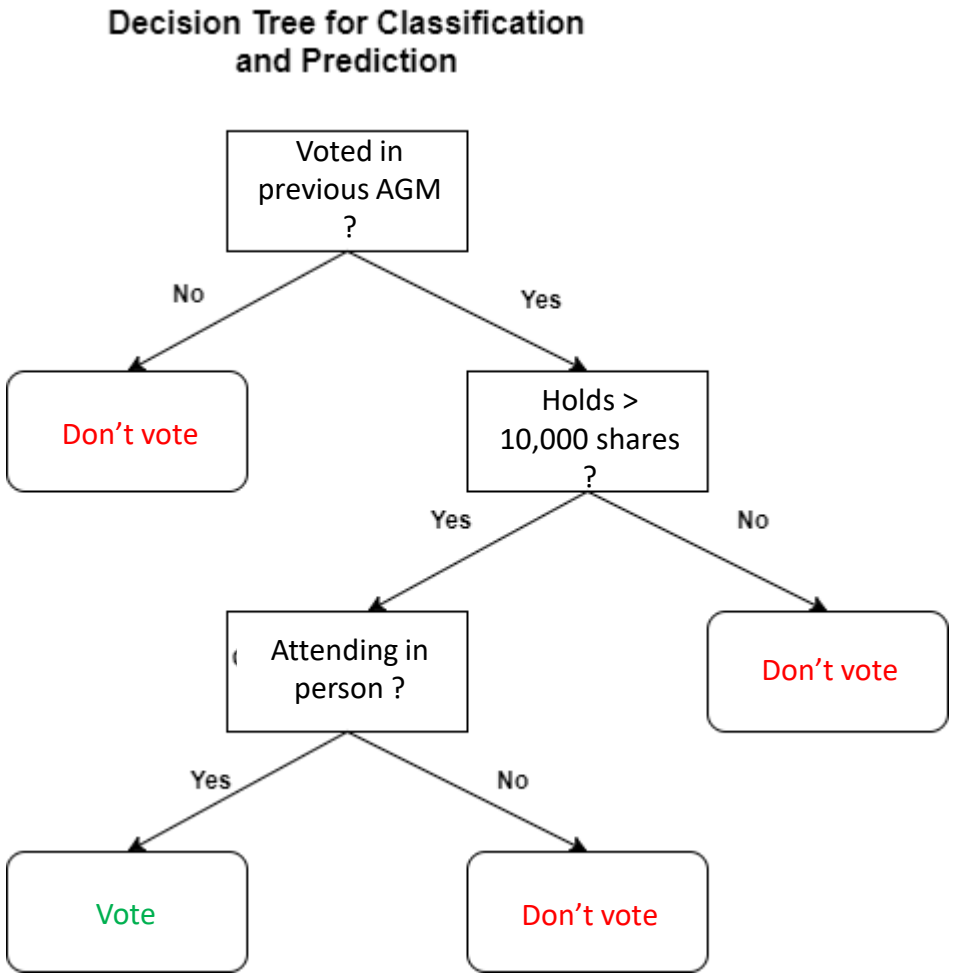
EXAMPLE 4 – SHAREHOLDER VOTING

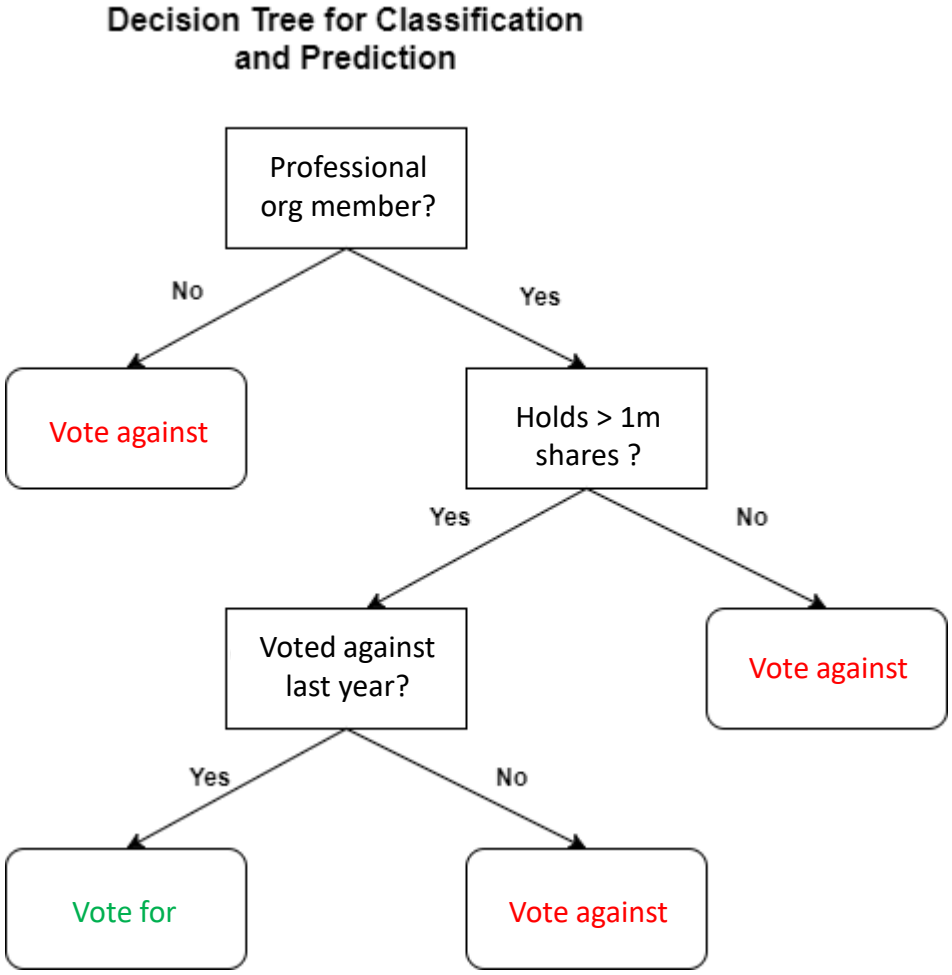
PREDICTIVE MODELS

PREDICTING SHAREHOLDER VOTING

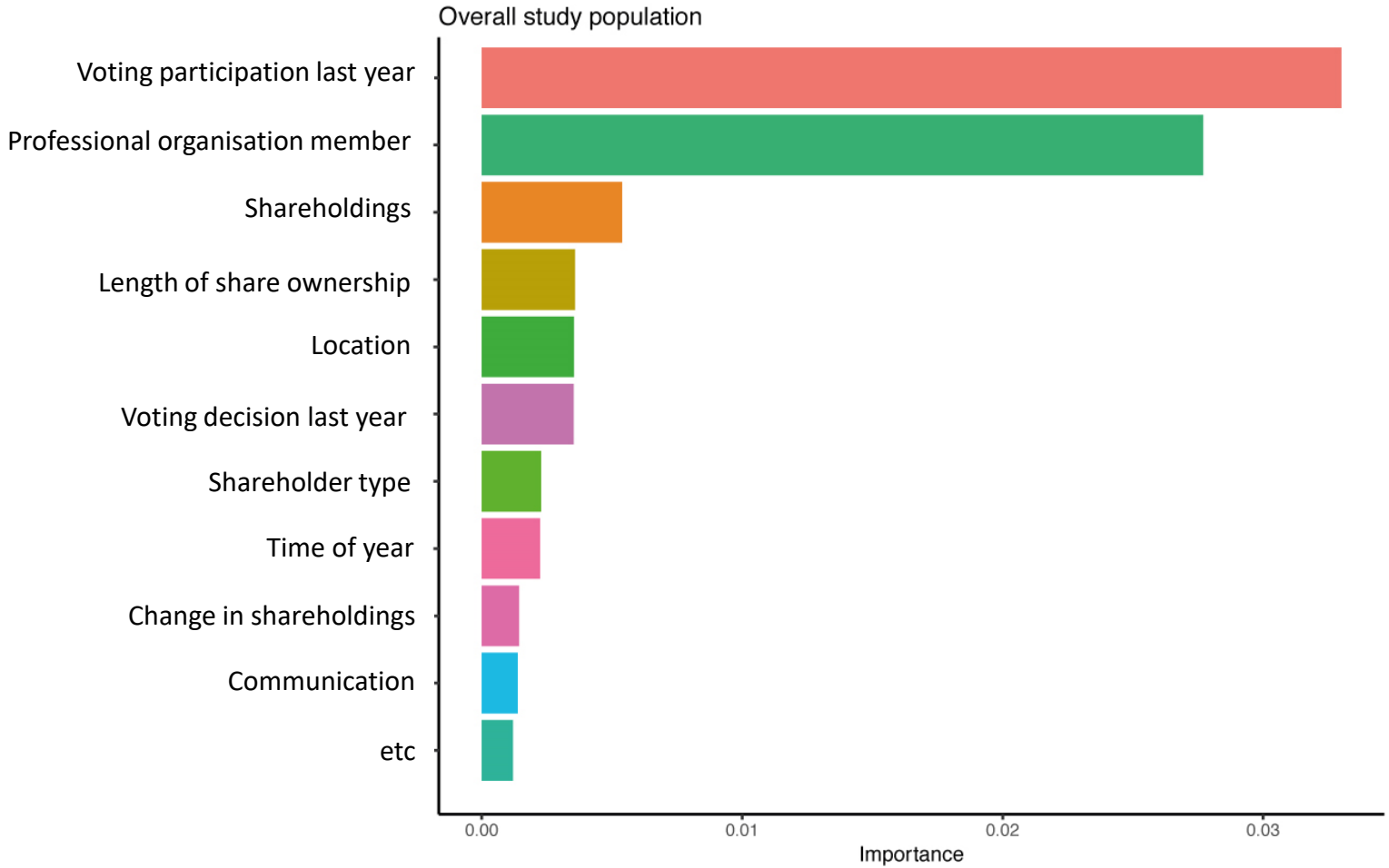


PREDICTING SHAREHOLDER VOTING





PREDICTING SHAREHOLDER VOTING

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