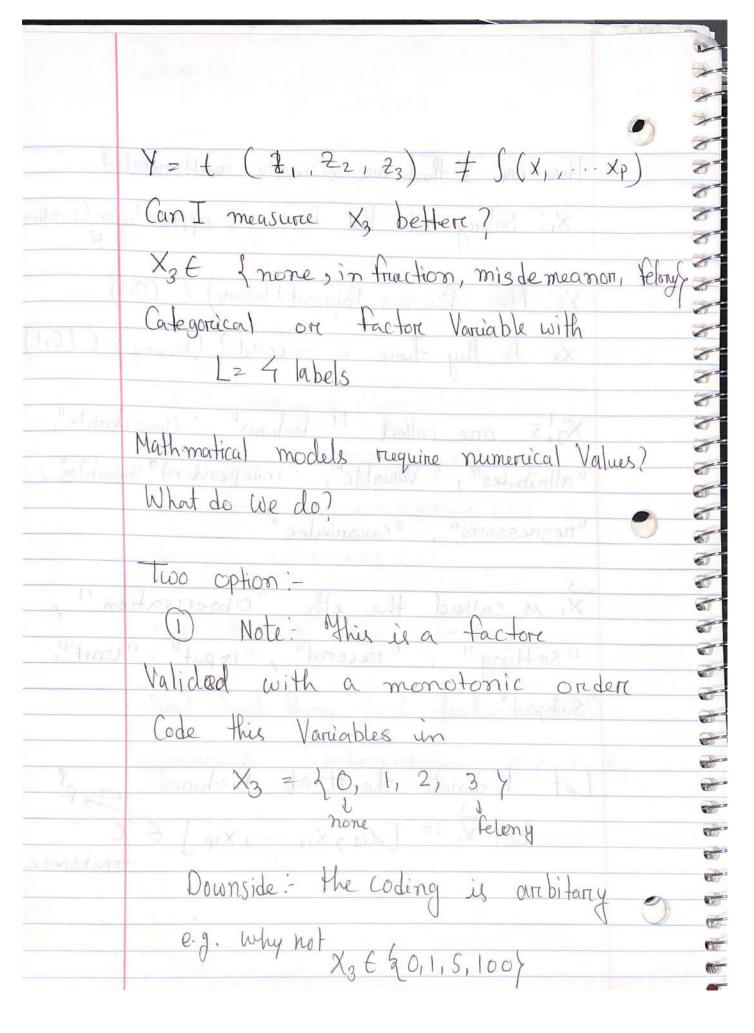
Lecture 20 YE y = 20,19 -1) Y = t (Z₁, Z₂, Z₃) true Causa Trivers. Payback morrtgage (10rco) Z₁: has the money (1)
Z₂: Unforces emergency (1)
Z₃: is crieminal (1) t = 21 (1-22) (1-23) Next best thing find features that approximate "information" in 2,, 2, 2,

Here are 3 that are directly related Xi: Salary at the time of application (continuo ER X2: Miss Previous Payment (binary) E (0,1) X3. Do they have a record? (binary) & (011) XJoS are called 11 features", " Characteristic", "affributes", "Variable", "independent Variables, "negressons", "Covariates" Xi is called the ith "Obsertvation" "Setting", "record", "input", "unit", Subject" P denote the # of features egs p et Xi = [Xi1, Xi2, ..., Xip] & X inputspace CA- Lety rest Xo E & O. I.



(3) Create multiple beatures: X3a E {0,1} is infraction? X3b € {0,19 is misdemeanon? X3CE {OIL & is felony? none is captured by X3a2 X3b= X3c = 0 L-1 binarry Variables Consider Xg E { Red, Circen, blue } unondered features use option 2. yz t (21, 22, 23) \$ f(x,..., χρ) y = + (2, 12, 23) = + (x, -1, xp) + 8S:= t-f is the epinon due to ignorance F: in the "leen" possible way of combining

	X,,Xp to minimize 8.
	The House is the first of the
	How to get f?
	Analytical Solution? NO
	The approach we will use is learning from a
Zairo-0.3	Use data to get an estimate of f. This procedure is also termed "supervised"
(9X	learning " There are three ingredients?
8 +((1) Straining Data (Data) Notation: 10
Someone epi	$D = \{(\overline{X}_1, y_1), (\overline{X}_2, y_2), (\overline{X}_n, y_n) \}$
Spained (ITA)	Mitristo Historical examples. Sample 1-e. it happened already

