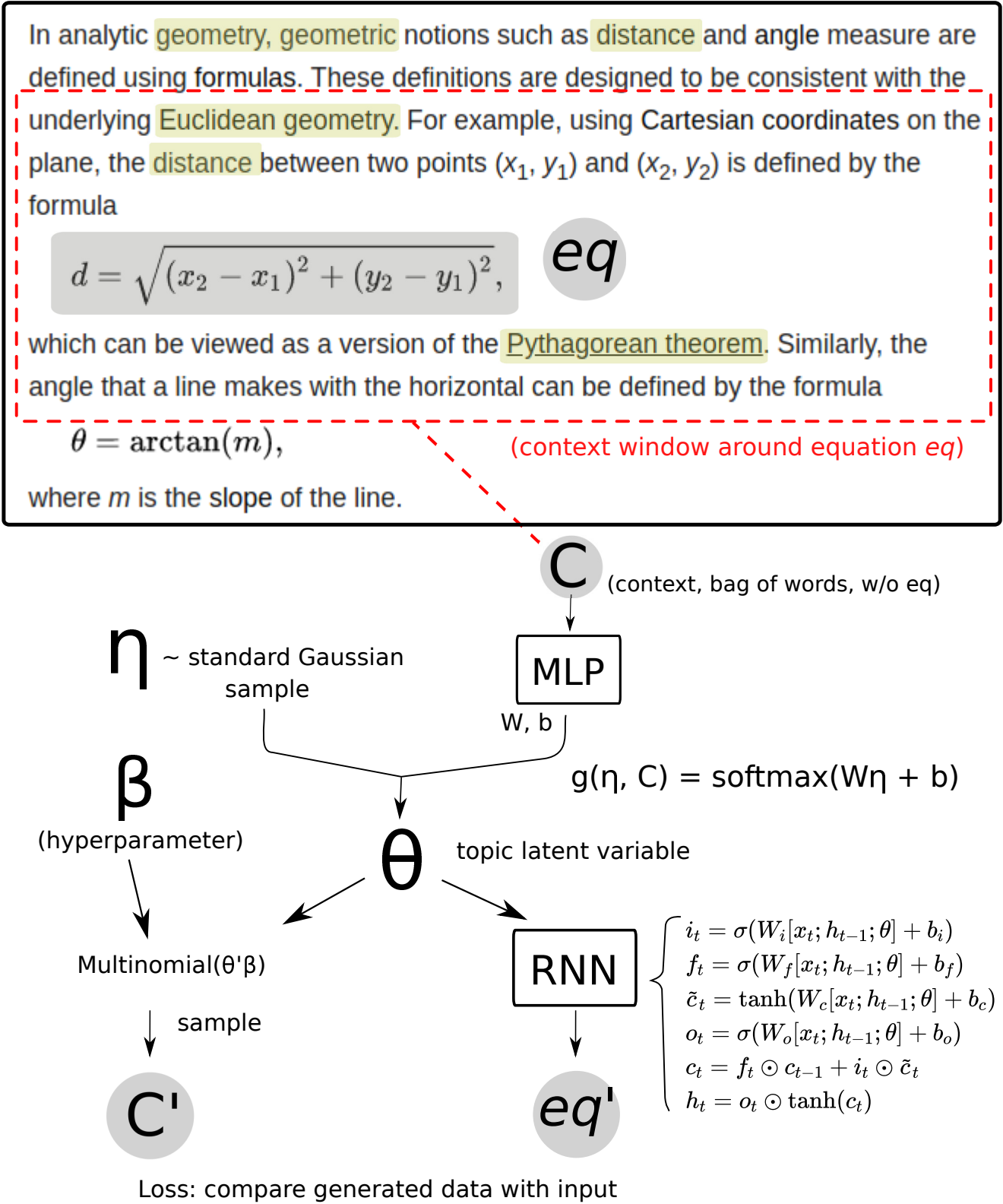
In analytic geometry, geometric notions such as distance and angle measure are defined using formulas. These definitions are designed to be consistent with the underlying Euclidean geometry. For example, using Cartesian coordinates on the plane, the distance between two points (x_1, y_1) and (x_2, y_2) is defined by the formula
$d = \sqrt{(x_2 - x_1)^2 + (y_2 - y_1)^2},$
eq
which can be viewed as a version of the Pythagorean theorem. Similarly, the angle that a line makes with the horizontal can be defined by the formula
$\theta = \arctan(m),$
where m is the slope of the line.
(context window around equation eq)
C
(context, bag of words, w/o eq)
η
~ standard Gaussian sample
MLP
W, b
g(η, C) = softmax(Wη + b)
β
(hyperparameter)
θ
topic latent variable
Multinomial(θ'β)
sample
C'
RNN
$i_t = \sigma(W_i[x_t; h_{t-1}; \theta] + b_i)$
$f_t = \sigma(W_f[x_t; h_{t-1}; \theta] + b_f)$
$\tilde{c}_t = \tanh(W_c[x_t; h_{t-1}; \theta] + b_c)$
$o_t = \sigma(W_o[x_t; h_{t-1}; \theta] + b_o)$
$c_t = f_t \odot c_{t-1} + i_t \odot \tilde{c}_t$
$h_t = o_t \odot \tanh(c_t)$
eq'
Loss: compare generated data with input