

# Universal Translator

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## 1 Introduction

We can use this function to calculate the likelihood of a given set of strings being accepted by a language recognition system by first calculating the integral of the function  $\rho$  with respect to the random variables  $G[X, Y]$  and the measure  $\Xi$ , then calculating the tensor product of the constant  $w$  with the variable  $Z$  and a relation  $R$  applied to  $Z$  and the subset of  $\downarrow \mathcal{L}$  in the vector space, and finally calculating the integral of the variable  $v$  with respect to the variable  $Q$  and a relation  $R$  applied to  $Q$  and the inverse of the second-order polynomial  $\phi_2$  evaluated at  $B$ . The resulting probability is then an indication of the likelihood that a given set of strings will be accepted by the language recognition system.

$$P[a, b, c, d, \dots] = \Gamma_0 \left( \int \rho(a, b) dG[X, Y] \cup \Xi \mu(n) - \otimes [w, ZRZ^{-1} \exists V \subseteq \downarrow \mathcal{L} \subseteq] + \int v \exists QRP \phi_2^{-1/n} \cap B \right)$$

We can demonstrate an example of applying this function by finding the probability of a given set of strings being accepted by a language recognition system. To do this, we first calculate the integral of the function  $\rho$  with respect to the random variables  $G[X, Y]$  and the measure  $\Xi$ . Let us assume the integral is equal to  $\gamma$ . Next, we calculate the tensor product of the constant  $w$  with the variable  $Z$  and a relation  $R$  applied to  $Z$  and the subset of  $\downarrow \mathcal{L}$  in the vector space. Let us assume the tensor product is equal to  $\tau$ . Lastly, we calculate the integral of the variable  $v$  with respect to the variable  $Q$  and a relation  $R$  applied to  $Q$  and the inverse of the second-order polynomial  $\phi_2$  evaluated at  $B$ . Let us assume the integral is equal to  $\iota$ . The probability of a given set of strings being accepted by the language recognition system is then given by  $P[a, b, c, d, \dots] = \Gamma_0(\gamma \cup \tau + \iota)$ .

The variables used in this expression can be used to represent various aspects of the language recognition system. For example, the variables  $G[X, Y]$  and  $\Xi$  represent the random variables and measure used to calculate the likelihood of a given set of strings being accepted, while the variable  $Z$  represents the variable used to determine the relation between the strings and the language. The variable  $V$  represents the subset of the language  $\mathcal{L}$  used in the calculation and the variable  $Q$  represents the variable used to evaluate the inverse of the second-order polynomial  $\phi_2$ . Finally, the set  $B$  represents the set used to evaluate the outcome of the calculation.

In order for a language recognition system to accept normal language strings most of the time, the values used to calculate the likelihood of the strings being accepted should be chosen such that the integrals evaluate to positive values. For example, the value of the variable  $G[X, Y]$  should be chosen such that the corresponding integral evaluates to a positive value, while the set  $B$  should be chosen such that the inverse of the second-order polynomial  $\phi_2$  is evaluated at a set that contains values within the range of the variable  $Q$ . Additionally, the relation  $R$  should be chosen such that the tensor product of the constant  $w$  and the variable  $Z$  results in a positive value.

To create the logical operator of the universal translator, we can use the above equation as a starting point and use the mathematical expression to create the logical operator of the universal translator as follows:

$$U(u, v, w, y, z, \dots) = \otimes [u, v, w, y, z, \dots] \rightarrow \mathcal{ABC}x - \otimes [x, \tilde{x}RR] + \Omega_\Lambda \left( \tan \psi \diamond \theta + \Psi \star \sum_{[n] \star [l] \rightarrow \infty} \frac{1}{n^2 - l^2} \right).$$

This logical operator takes the input variables  $u$ ,  $v$ ,  $w$ ,  $y$ ,  $z$ , and  $\dots$  and uses the operators  $\otimes$  and  $\rightarrow$  to transform the input into the desired output. The operators  $\mathcal{ABC}$ ,  $\tilde{x}$ ,  $R$ ,  $\Omega_\Lambda$ ,  $\tan$ ,  $\psi$ ,  $\diamond$ ,  $\theta$ ,  $\Psi$ ,  $\star$ , and  $\frac{1}{n^2 - l^2}$  are used to modify the output of the logical operator so that it produces the desired output. This logical operator can then be used as part of a universal translator to translate language strings in real-time so that they can be understood by humans.