Doğal Dil İşleme Yöntemleri ve Ölçme

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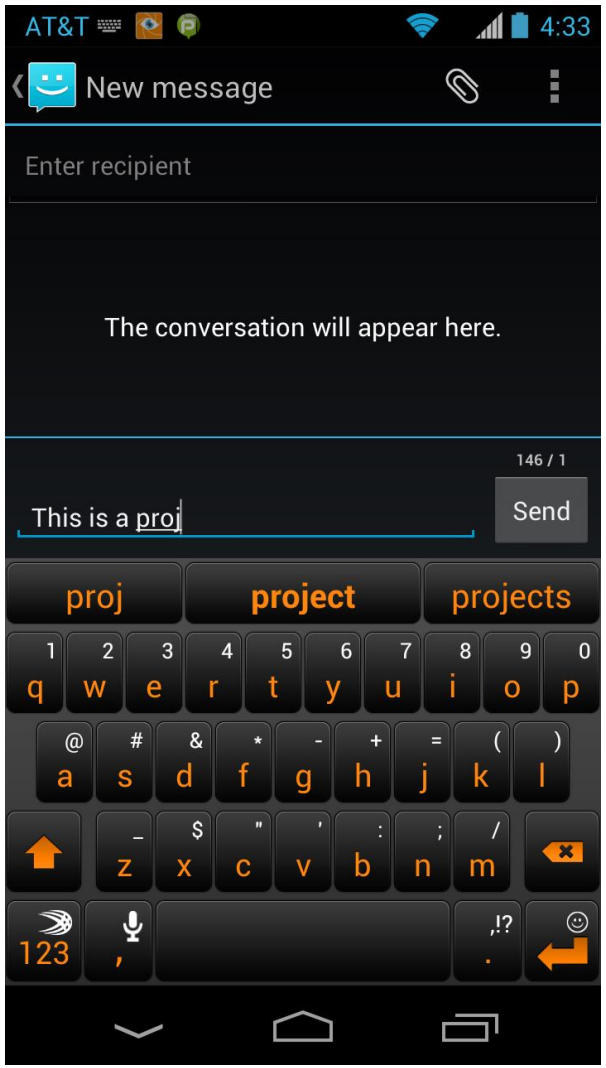
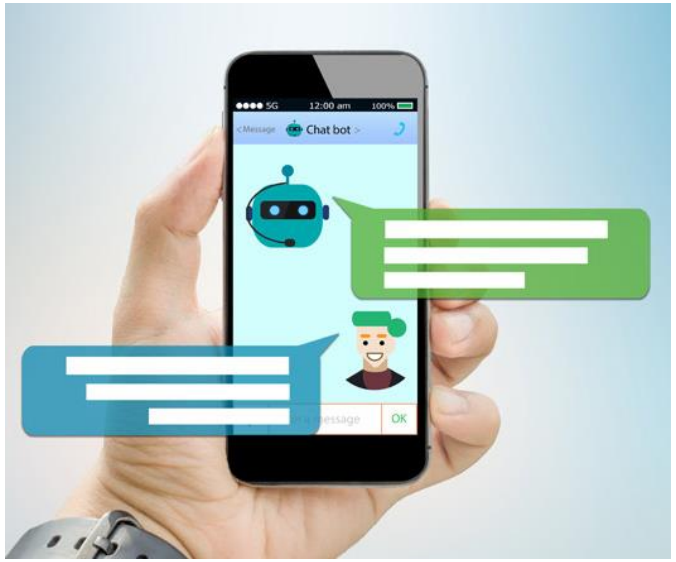
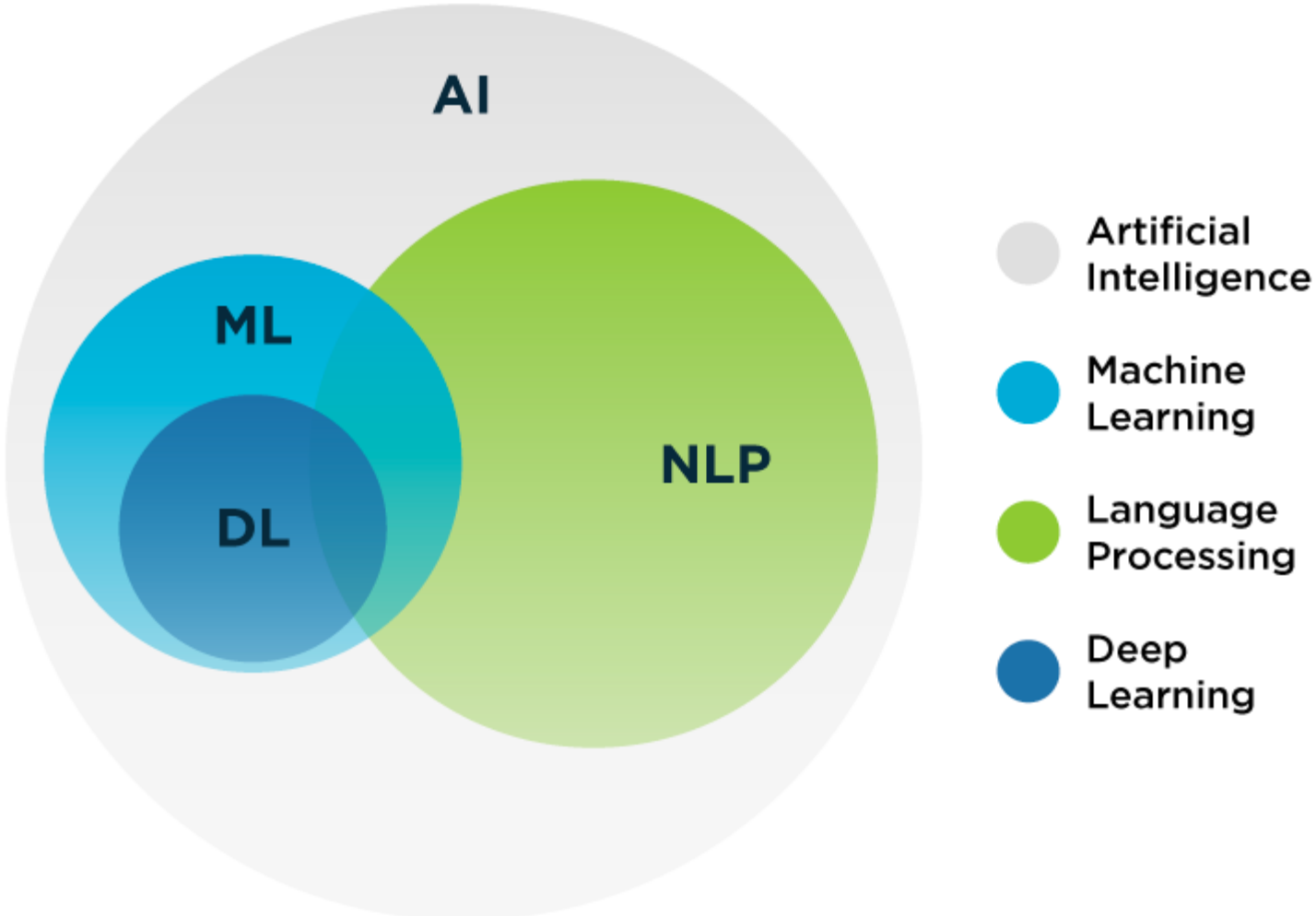
amazon alexa

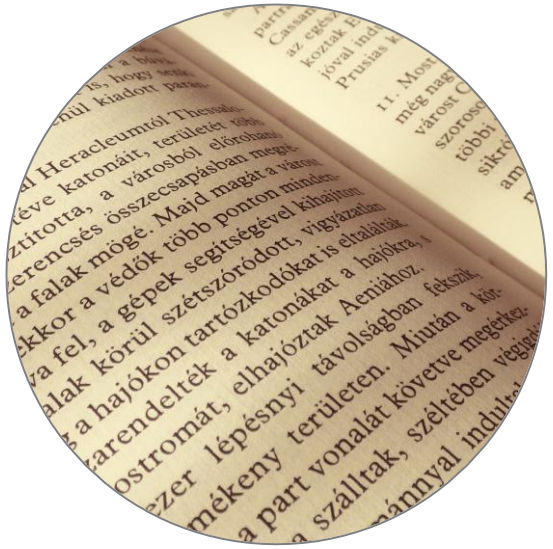




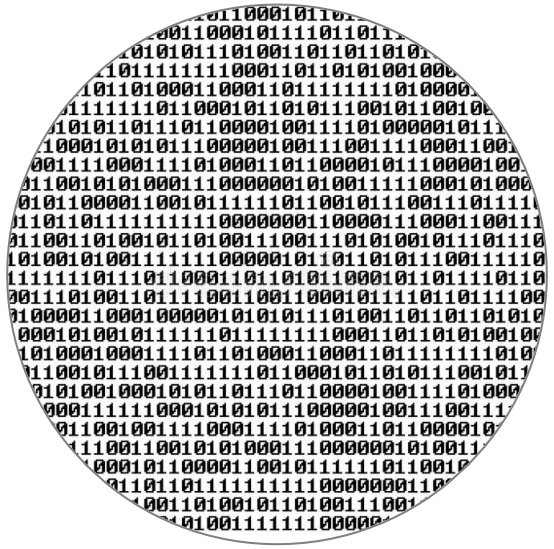


Source: Service Express

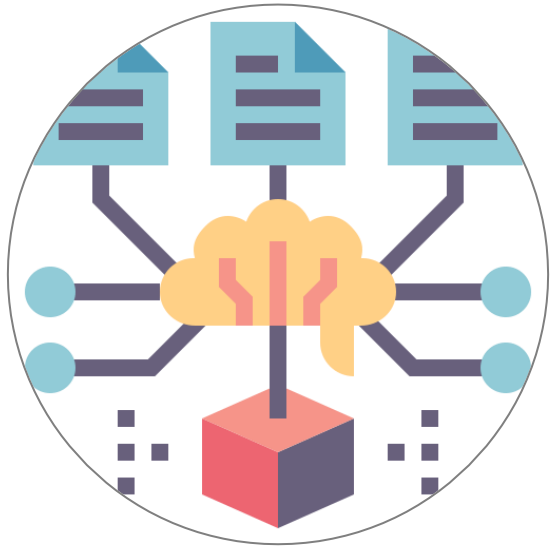
Doğal Dil İşleme Nasıl Çalışıyor?



Korpus (bütünce) belirleme



Kelime, kelime grupları, ya da cümleleri vektörel hale dönüştürme

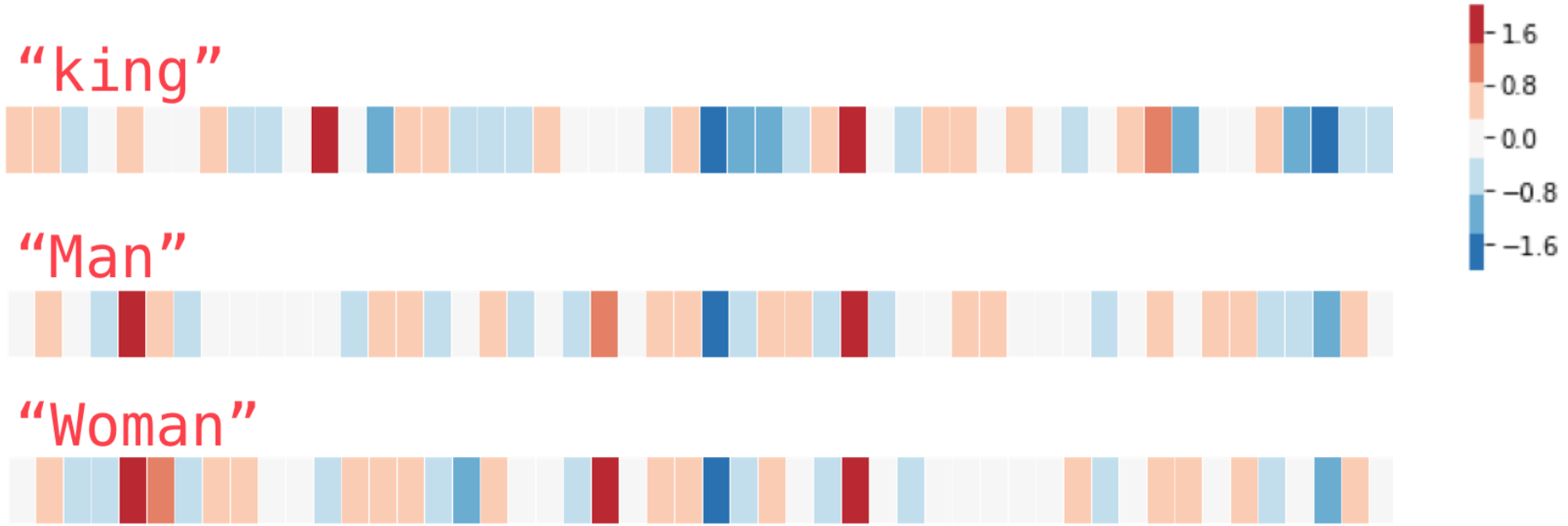


Vektörler arasındaki benzerliğe dayalı model oluşturma

Korpus: Wikipedia ile oluşturulmuş GloVe modeli

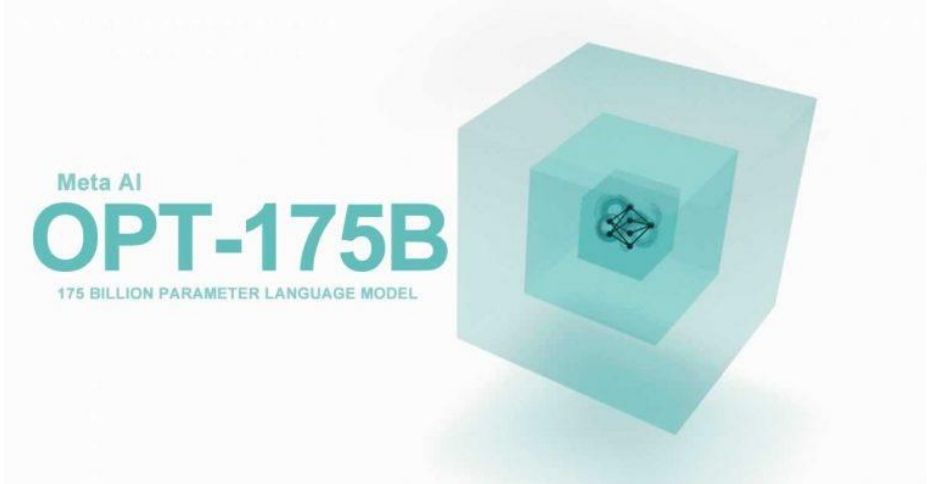
Kelime: King (kral) → [1 x 50]

[0.50451 , 0.68607 , -0.59517 , -0.022801, 0.60046 , -0.13498 , -0.08813 , 0.47377 , -0.61798 , -0.31012 , -0.076666, 1.493 , -0.034189, -0.98173 , 0.68229 , 0.81722 , -0.51874 , -0.31503 , -0.55809 , 0.66421 , 0.1961 , -0.13495 , -0.11476 , -0.30344 , 0.41177 , -2.223 , -1.0756 , -1.0783 , -0.34354 , 0.33505 , 1.9927 , -0.04234 , -0.64319 , 0.71125 , 0.49159 , 0.16754 , 0.34344 , -0.25663 , -0.8523 , 0.1661 , 0.40102 , 1.1685 , -1.0137 , -0.21585 , -0.15155 , 0.78321 , -0.91241 , -1.6106 , -0.64426 , -0.51042]



Source: https://jalammar.github.io/illustrated-word2vec/

Google BERT Algorithm



OpenAI

GPT-3, an autoregressive language model with 175 billion parameters

NVIDIA

Megatron-Turing Natural Language Generation model (MT-NLG) with 530 billion parameters

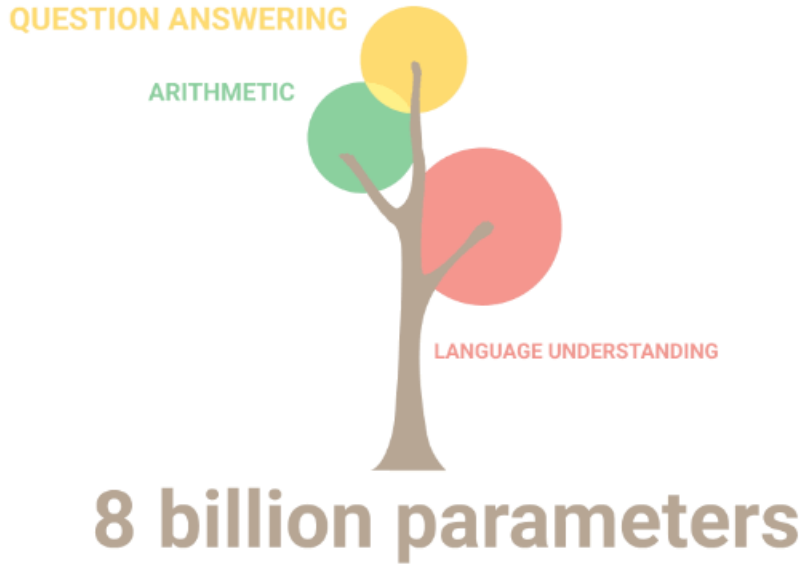
Google BERT Multilingual Model

https://huggingface.co/bert-base-multilingual-cased

BERTurk

https://github.com/stefan-it/turkish-bert

https://huggingface.co/dbmdz/bert-base-turkish-cased

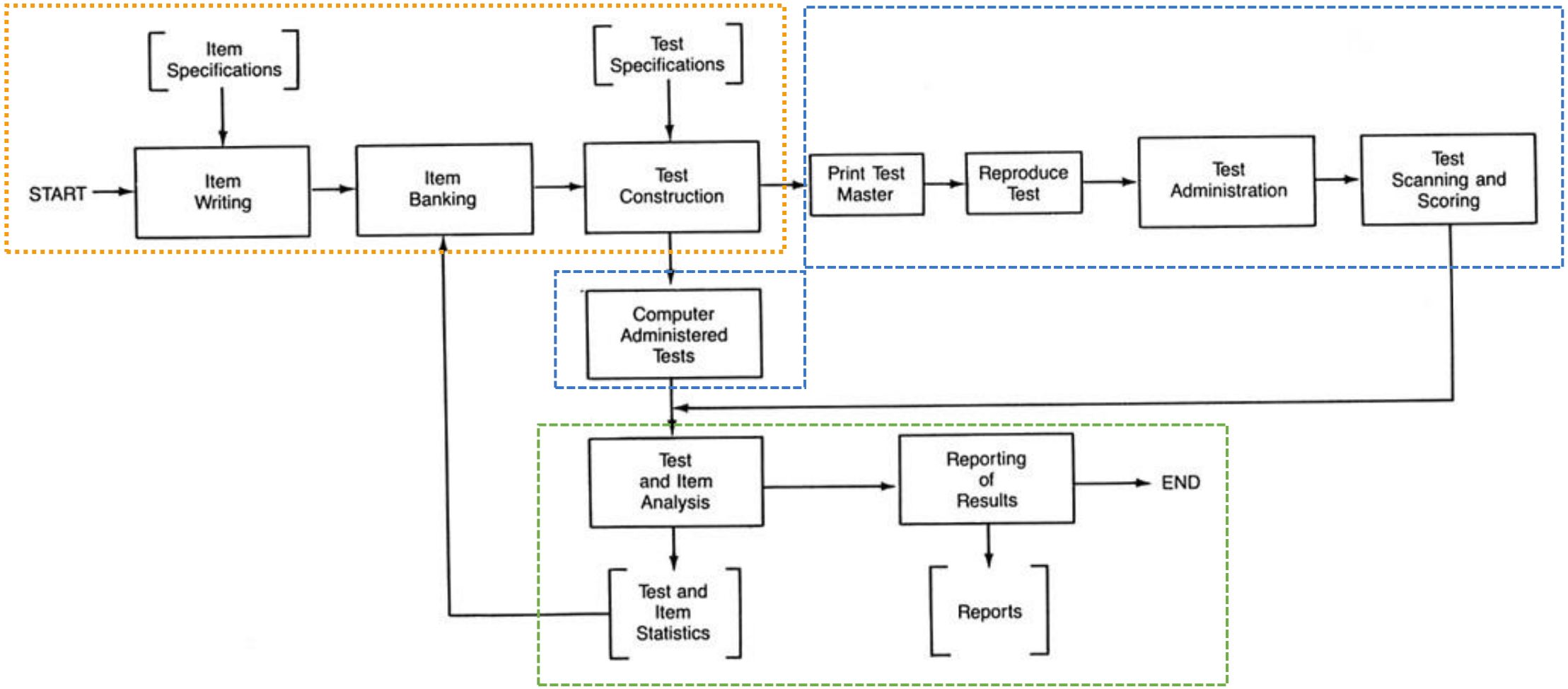


Source: https://ai.googleblog.com/2022/04/pathways-language-model-palm-scaling-to.html

NLP ve Ölçme

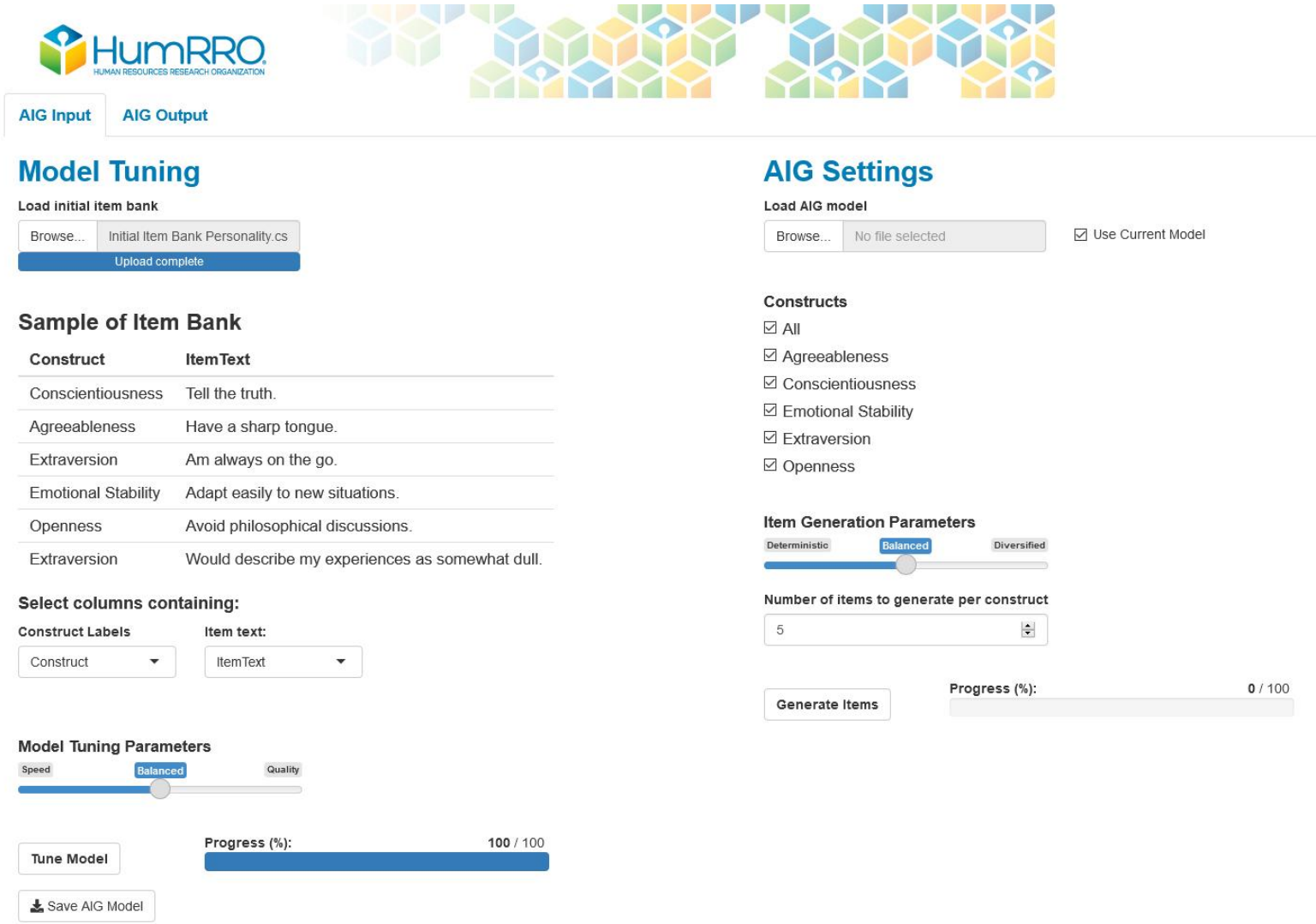
Soru ve Test Geliştirme

Testin Uygulanması



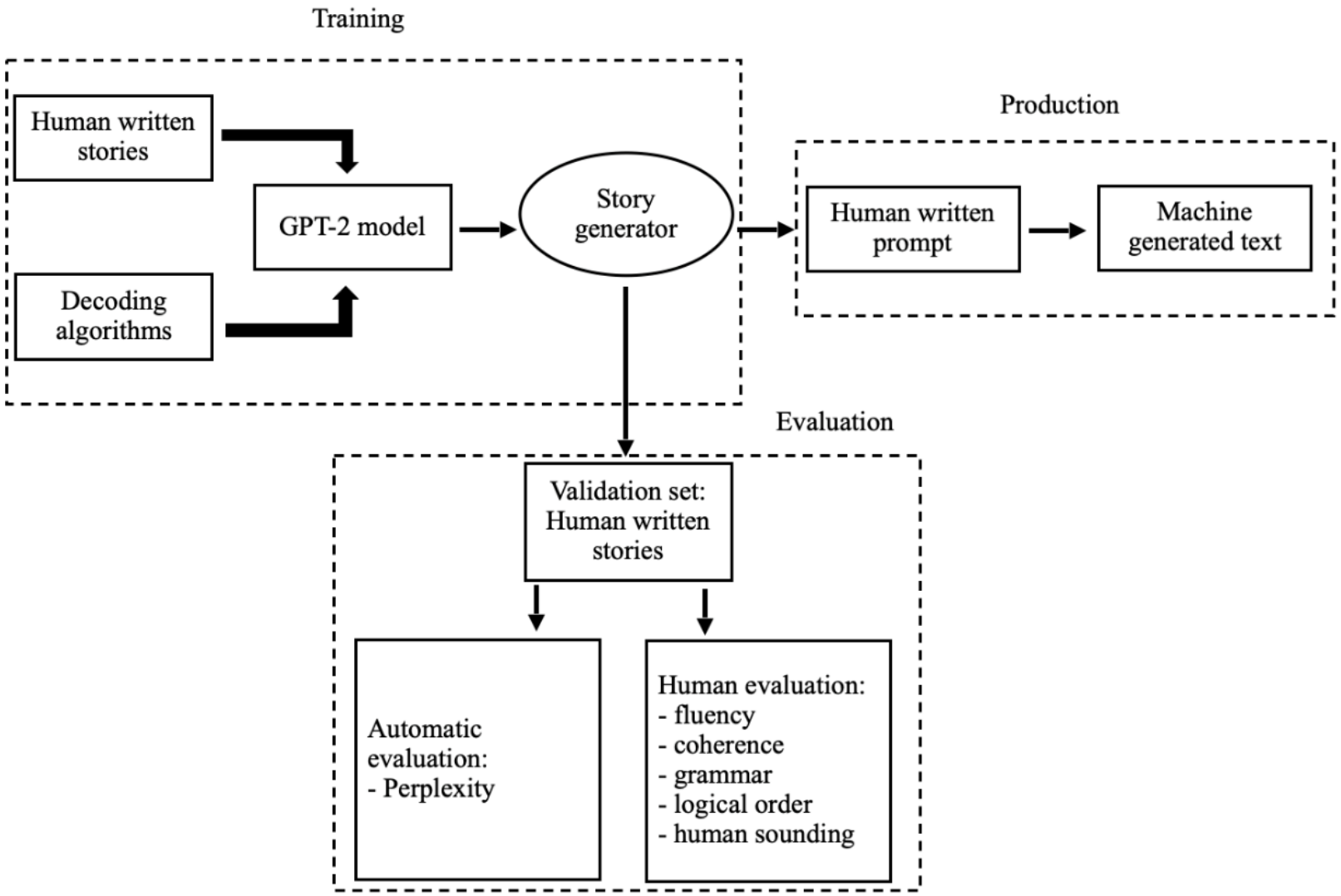
Puanlama ve Raporlama

NLP ile Otomatik Soru Geliştirme



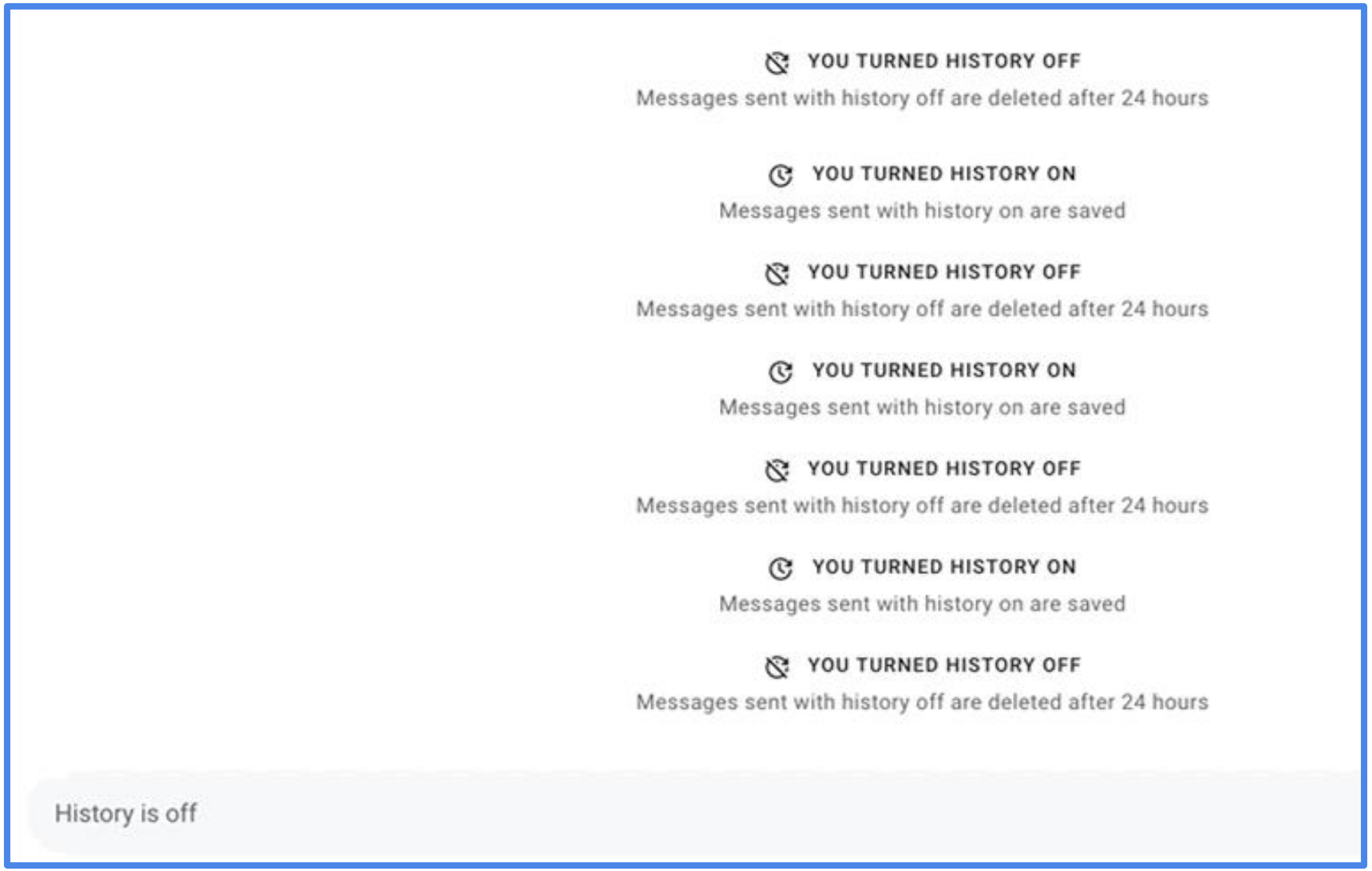
Source: https://www.humrro.org/corpsite/blog/harnessing-the-power-of-natural-language-processing-for-on-demand-automated-item-generation/#

NLP ile Otomatik Okuma Parçası Geliştirme



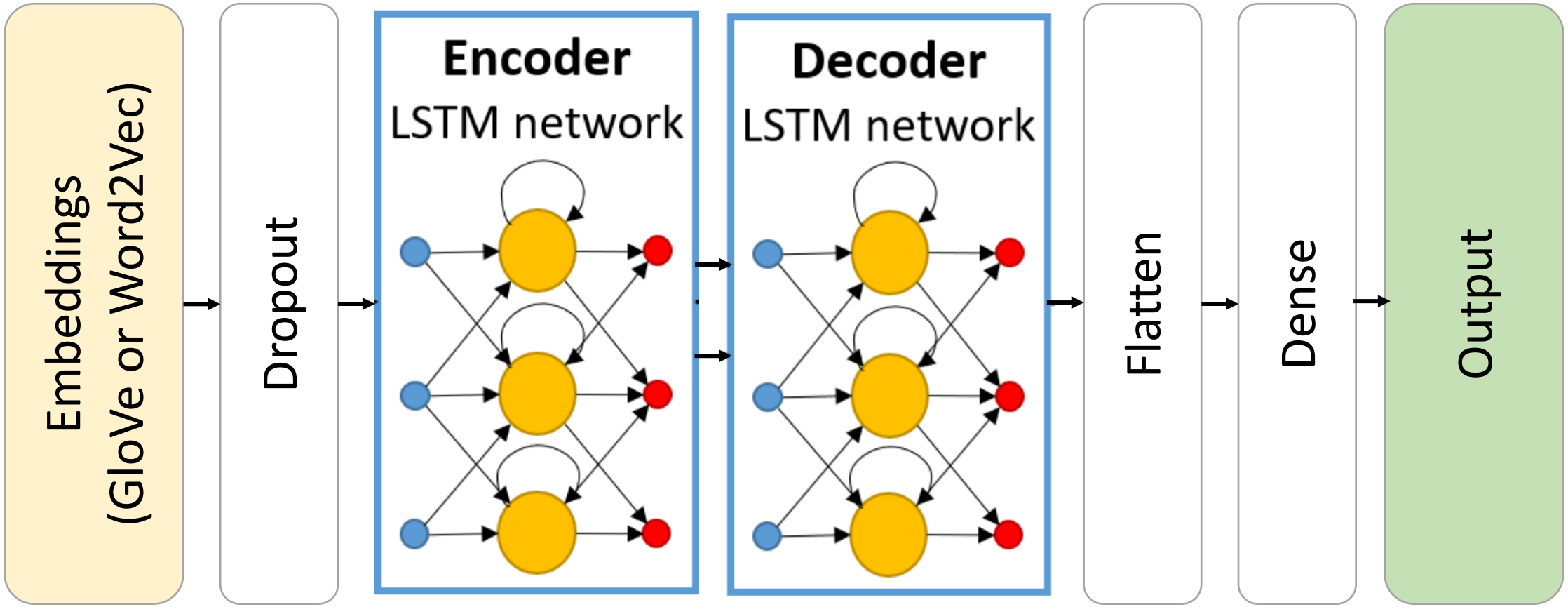
Bulut, O., & Yildirim-Erbasli, S. N. (In press). Automatic story and item generation for reading comprehension assessments with transformers. *International Journal of Assessment Tools in Education*.

Çevrimiçi Karşılıklı Konuşma ile Değerlendirme



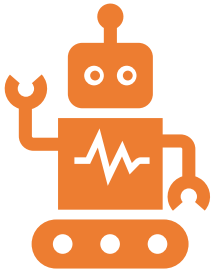
Yildirim-Erbasli, S. N., & Bulut, O. (2021). Conversation-based assessments: Real-time assessment and feedback. *eLearn Magazine*, *12*, Article 1. doi:10.1145/3495533

NLP ile Otomatik Puanlama



Firoozi, T., Bulut, O., Abadi, A. N., Demmans Epp, C., & Barbosa, D. (In press). The effect of word vector representation on the accuracy of automated essay scoring systems using neural networks. *Journal of Applied Testing Technology*.

Diğer NLP Uygulamaları



Otomatik geribildirim oluşturma

Bernius et al. (2022). Machine learning based feedback on textual student answers in large courses.
https://doi.org/10.1016/j.caeai.2022.100081

Öğrencilerden gelen geribildirim ve yorumların duygu (sentiment) açısından incelenmesi

Dalipi et al. (2021). Sentiment analysis of students' feedback in MOOCs: A systematic literature review.
https://doi.org/10.3389/frai.2021.728708

Dinlediğiniz için teşekkür ederim.