One Hot Encoding: Limitations



Limitations

Consider the sentences below:

"the bus is running late"

"the train is running late"



Limitations

Consider the sentences below:

```
" the bus is running late"

" the train is running late"
```

One Hot Vectors (Vocab size = 21)

```
bus - [0,0,0,0,0,0,0,0,0,0,0,0,1,0,0,0,0,0,0]
```



Limitations

Consider the sentences below:

```
"the bus is running late" the ___ is running late the train is running late" the ___ is running late the ___ is running late
```

One Hot Vectors (Vocab size = 21)



Word Embeddings

Consider the sentences below:

```
"the bus is running late" the ___ is running late the train is running late the ___ is running late the ___ is running late dentical

Word Embeddings
```

- Vector for a word (does not depend on vocabulary size)
- Captures the context around the word



Word Embeddings

bus - [0,0,0,0,0,0,0,0,0,0,0,0,1,0,0,0,0,0]

One Hot Encoded Vector

-0.01 0.02 1.1 -0.3 0.11 -0.02

Word Embeddings

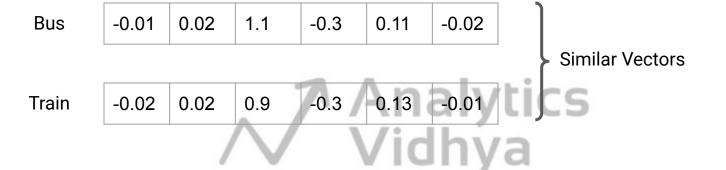
One Hot Encoded Vector

-0.02 0.02 0.9 -0.3 0.13 -0.01

Word Embeddings



Word Embeddings





Thank You tics Vidhya

