# **Preliminary Results**

Cédric Milinaire Summer period 2019 This document is used to summarize current results.

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#### 1 Sampling

For Table 2 the text8 dataset was used, all words that occured less than 5 times were deleted from the dataset before each sampling technique.

Table 1: Statistics about dataset with different sampling techniques

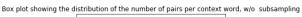
	w/o sampling	Online Sampling	Mikolov	w/o outliers
Min	34	34	34	
Max	9Mio	0.36 Mio.	0.36 Mio	
QTR1	79	79	79	
Median	166	166	166	
Mean	2227	1125	1125	
QTR3	533	533	534	
QTR3 + 1.5IQR	1214	1214	1217	

Table 2: Statistics about dataset with different sampling techniques

	w/o sampling	Online Sampling	Mikolov	w/o outliers
Size of Ds (in words)	17 Mio.	17 Mio.	8 Mio.	
Number of Pairs	141 Mio.	71 Mio.	71. Mio	
Number of Sentences	0.8 Mio	0.8 Mio	$0.4 \mathrm{\ Mio}$	

### 2 Boxplots

Figure 1: Distribution of the number of pairs per context word without sampling



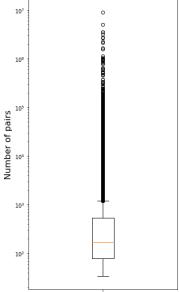


Figure 2: Distribution of the number of pairs per context word with online sampling Box plot showing the distribution of the number of pairs per context word, w/ online subsampling

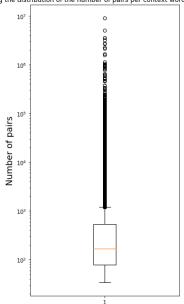
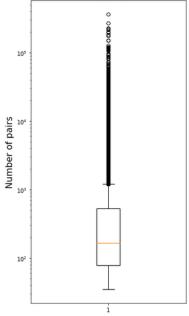


Figure 3: Distribution of the number of pairs per context word with preprocessing sampling  $\frac{1}{2}$ 

Box plot showing the distribution of the number of pairs per context word, w/ preprocessing subsampling



## 3 Batch\_size

This section shows a plot of the batch size per batch.

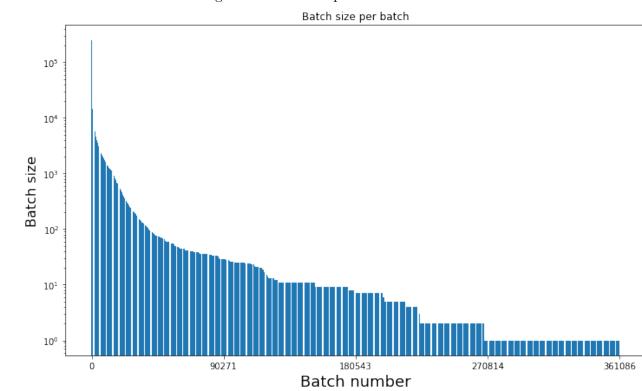


Figure 4: Batch size per batch