

Model / Task	Average	Tokens	Sentences	Words	UPOS	XPOS	UFeats	AllTags	Lemmas	Time CPU	Time GPU
<i>concraft</i>	91.61	98.56	71.33	99.64	95.88	90.04	90.59	90.04	96.79	3504.6	–
<i>udpipe + fastText</i>	94.43	99.75	90.51	<b>99.73</b>	97.36	90.64	90.97	90.64	95.86	<b>43.6</b>	45.2
<i>combo + fastText</i>	95.75	99.12	<b>93.33</b>	99.04	97.25	93.82	93.61	92.98	96.90	468.9	145.8
<i>combo + HerBERT</i>	<b>96.67</b>	99.12	<b>93.33</b>	99.04	<b>97.80</b>	<b>95.66</b>	<b>95.75</b>	<b>95.20</b>	<b>97.42</b>	827.8	166.6
<i>stanza + fastText</i>	95.89	<b>99.76</b>	92.70	99.45	97.43	93.57	93.90	93.36	96.94	163.1	52.1
<i>spacy + pl-core-news-lg</i>	75.38	99.56	61.85	98.46	96.30	90.97	31.03	30.14	94.77	62.6	<b>26.9</b>
<i>spacy + fastText</i>	75.15	99.56	61.85	98.46	95.89	89.93	31.03	30.08	94.43	61.9	27.1
<i>spacy + BERT-pl</i>	76.12	99.56	61.85	98.46	97.02	94.60	31.03	30.46	95.98	160.9	42.3
<i>trankit + xlm-Roberta-base</i>	92.59	98.37	89.39	97.84	95.36	89.74	90.05	88.73	91.19	480.3	192.3

Table 2: Results (F1 scores) and inference time (in seconds) of benchmarking morphosyntactic analyzers on the Morfeusz tagset averaged by the datasets (*byName* and *byType*). The evaluated systems are divided into two categories: non-neural and systems based on neural networks.

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<i>udpipe + fastText</i>	92.30	<b>99.79</b>	92.44	<b>99.78</b>	97.33	89.97	90.37	89.35	95.23	51.0	51.5
<i>combo + fastText</i>	94.04	99.18	<b>94.29</b>	98.77	96.64	93.30	93.48	91.97	96.53	415.7	135.2
<i>combo + HerBert</i>	<b>95.51</b>	99.21	<b>94.29</b>	98.77	<b>97.57</b>	<b>95.33</b>	<b>95.61</b>	<b>94.54</b>	<b>97.13</b>	826.8	152.6
<i>stanza + fastText</i>	94.25	99.77	93.92	99.43	97.33	92.88	92.90	91.63	96.60	178.6	48.2
<i>spacy + pl-core-news-lg</i>	88.39	99.58	65.05	98.47	96.36	90.95	91.22	89.65	93.62	40.1	39.9
<i>spacy + fastText</i>	87.68	99.58	65.05	98.47	95.79	89.77	90.05	88.37	93.37	<b>40.0</b>	<b>29.6</b>
<i>spacy + BERT-pl</i>	90.70	99.58	65.05	98.47	97.26	94.68	94.84	94.09	94.89	173.5	48.4
<i>trankit + xlm-Roberta-base</i>	92.91	98.88	92.44	98.52	96.50	91.74	91.91	90.21	90.47	439.8	172.6

Table 3: Results (F1 scores) and inference time (in seconds) of benchmarking morphosyntactic analyzers on UD tagset averaged by the datasets (*byName*, *byType*, and *PDB-UD*). Similarly as in Table 2 the evaluated systems are divided into two categories. (Concraft is not included because it does not allow data in the UD tagset.)