

RelIE	FeatID	Interpreted Function
4B specific		
[1.00, 0.00, 0.00]	675	Regular plural noun detector, activates on final tokens of regular plural nouns and promotes new word completions
[1.00, 0.00, 0.00]	10707	-
[0.99, 0.00, 0.01]	8433	-
[1.00, 0.00, 0.00]	15961	Nominalization feature that detects deverbal and derivational nouns (, <i>-ance</i> , <i>-ion</i> , <i>-ing</i> etc.)
[0.64, 0.24, 0.12]	3269	Singular noun detector preceeded by <i>This</i> , promotes singular verb conjugations
4B-33B shared		
[0.36, 0.34, 0.30]	702	Plural noun detector preceeded by plural quantifier (<i>most</i> , <i>some</i>), promotes plural verb conjugation
4B-3048B shared		
[0.38, 0.25, 0.37]	16117	Stock-ticker/exchange-code detector
33B specific		
[0.00, 1.00, 0.00]	5966	Detects commas followed by parenthetical clauses
[0.03, 0.90, 0.07]	7527	Headline/title-case text detector
[0.00, 0.80, 0.19]	10924	Detects first names that aren't followed up by last names
[0.00, 1.00, 0.00]	10692	Regular plural noun detector
33B-3048B shared		
[0.00, 0.50, 0.50]	9908	Noun/head-of-NP detector (both common and proper, singular and plural, simple or compound)
[0.00, 0.50, 0.50]	15717	Plural noun detector for plural people nouns highlighting attributes or jobs
[0.00, 0.52, 0.48]	14569	Detects last token of multi-token first names followed by last names
[0.00, 0.46, 0.54]	9230	<i>-s/-es</i> noun inflection detector on stems that could have been verbs but become nouns
[0.02, 0.65, 0.33]	847	Detects final token of first names to be followed by last names
3048B specific		
[0.25, 0.24, 0.51]	3515	Newline detector
[0.00, 0.29, 0.71]	13176	Detects plural countable objects
[0.01, 0.24, 0.75]	8084	-
[0.09, 0.06, 0.85]	1469	-
[0.00, 0.00, 1.00]	1656	Detects punctuation or conjunction preceeded by named entities, promotes certain verb conjugations
[0.00, 0.00, 1.00]	6319	Newline detector
[0.00, 0.00, 1.00]	5550	Newline detector that promotes certain sentence beginnings

Table 1: **3-way L1-Sparsity Crosscoder Annotation for OLMo-1B — Comparison 4B 33B 3048B.** Similar to Pythia, OLMo progresses from detecting lower-level lexical and morphological patterns in early checkpoints to more abstract grammatical and noun-phrase features later on, but OLMo may be retaining a stronger persistence of surface-level detectors (, newlines, suffixes) compared to Pythia’s sharper shift.