OD-LSTM: An Efficient Network For Named Entity Recognition

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Abstract

With the risen use of AI application, we need to understand some specific type of message from user's query. Named Entity Recognition(NER) is a basic task for that use. Gazzete is very useful when doing NER, however, most of the current method use iit in word embedding format, which will bring out the case, we need to retrain model when the word in gazzete is greatly changed. In this paper, we propose a conception, called Outer Dictionary(OD) LSTM, which means to use the outer type info of gazzete for each word, without using the specific word. Experiments shows it useful when doing NER task, and acheive a great improvement on task with which gazzete is heavily depended on.

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\usepackage{helvet}
\usepackage{courier}
\usepackage[hyphens]{url}
\usepackage{graphicx}
\urlstvle{rm}
\def\UrlFont{\rm}
\usepackage{graphicx}
\frenchspacing
\setlength{\pdfpagewidth}{8.5in}
\setlength{\pdfpageheight}{11in}
% Add additional packages here, but check
% the list of disallowed packages
\mbox{\ensuremath{\$}} (including, but not limited to
% authblk, caption, CJK, float, fullpage, geometry,
% hyperref, layout, nameref, natbib, savetrees,
% setspace, titlesec, tocbibind, ulem)
\mbox{\ensuremath{\$}} and illegal commands provided in the
% common formatting errors document
% included in the Author Kit before doing so.
% PDFINFO
% You are required to complete the following
% for pass-through to the PDF.
% No LaTeX commands of any kind may be
% entered. The parentheses and spaces
% are an integral part of the
\mbox{\ensuremath{\upsigma}} pdfinfo script and must not be removed.
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/Title (Type Your Paper Title Here in Mixed Case)
/Author (John Doe, Jane Doe)
/Keywords (Input your keywords in this optional area)
```

```
%
    Section Numbers
% Uncomment if you want to use section numbers
% and change the 0 to a 1 or 2
% \setcounter{secnumdepth}{0}

% Title and Author Information Must Immediately Follow
% the pdfinfo within the preamble
%
\title{Title}\\
\author\{Author 1 \ and Author 2\\
Address line\\
\ And\\
Author 3\\
Address line\\
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```
%
\begin{document}
\maketitle
\begin{abstract}
%...
\end{abstract}
```

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\bibliography{Bibliography-File}\\
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\end{document}\\
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\abovecaption	\abovedisplay	\addevensidemargin	\addsidemargin
addtolength	\baselinestretch	belowcaption	belowdisplay
break	\clearpage	\clip	\columnsep
\float	\input	\input	\linespread
newpage	\pagebreak	renewcommand	setlength
\text height	\tiny	\top margin	\trim
-	-		•

Table 2: LaTeX style packages that must not be used.

authblk	babel	caption	cjk
dvips	epsf	epsfig	euler
float	fullpage	geometry	graphics
hyperref	layout	linespread	lmodern
maltepaper	natbib	navigator	pdfcomment
psfig	pstricks	t1enc	titlesec
tocbind	ulem	'	

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if there are no showing field the sum to their turn total. At each decision point, a player may continue to roll or stop. If they decide to stop, they add their turn total to their total score and then it becomes the opponent's turn. Otherwise, they roll dice again continue adding to their turn total. If a single simple turn continue adding to their turn total. If a continue adding to their turn total turn ended (no points gained); if a single simple the players

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\\bf \Large AuthorFour,\textsuperscript{\rm 4}
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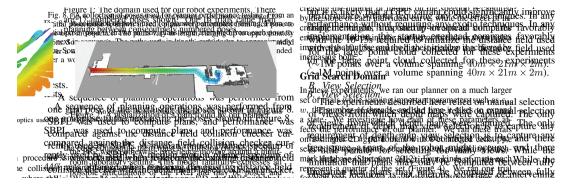


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\textsuperscript{\rm 2}AffiliationTwo,
\textsuperscript{\rm 3}AffiliationThree\\
\textsuperscript{\rm 4}AffiliationFour,
\textsuperscript{\rm 5}AffiliationFive
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\bibliographystyle{aaai} \bibliography{bibfile1,bibfile2,...}

Please note that you are required to use \bibliographystyle{aaai} for your references. You may not use named, plain, apalike, acm, ieeetr, siam, chicago, or any other style. Use of natbib is also not acceptable. (In addition to natbib, the aaai20.sty file is also incompatible with the hyperref and navigator packages. If you use either, your references will be garbled and your paper will be returned to you.) If you used natbib commands, an imprecise workaround is available (although it does not always work). You may put the following in your preamble (after removing \usepackage{natbib}

```
\newcommand{\citet}[1]{\citeauthor{#1} \shortcite{#1}}
\newcommand{\citep}{\cite}
\newcommand{\citealp}[1]{\citeauthor{#1} \citeyear{#1}}
```

References may be the same size as surrounding text. However, in this section (only), you may reduce the size to \small if your paper exceeds the allowable number of pages. Making it any smaller than 9 point with 10 point linespacing, however, is not allowed. A more precise and exact method of reducing the size of your references minimally is by means of the following command:

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\cite: Cites the given reference(s) with a full citation. This appears as "(Author Year)" for one reference, or "(Author Year; Author Year)" for multiple references.

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\citeauthor: Cites the given reference(s) with just the author name(s) and no parentheses.

\citeyear: Cites the given reference(s) with just the date(s) and no parentheses.

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Engelmore, R., and Morgan, A. eds. 1986. *Blackboard Systems*. Reading, Mass.: Addison-Wesley.

Journal Article

Robinson, A. L. 1980a. New Ways to Make Microcircuits Smaller. *Science* 208: 1019–1026.

Magazine Article

Hasling, D. W.; Clancey, W. J.; and Rennels, G. R. 1983. Strategic Explanations in Consultation. *The International Journal of Man-Machine Studies* 20(1): 3–19.

Proceedings Paper Published by a Society

Clancey, W. J. 1983. Communication, Simulation, and Intelligent Agents: Implications of Personal Intelligent Machines for Medical Education. In *Proceedings of the Eighth International Joint Conference on Artificial Intelligence*, 556–560. Menlo Park, Calif.: International Joint Conferences on Artificial Intelligence, Inc.

Proceedings Paper Published by a Press or Publisher Clancey, W. J. 1984. Classification Problem Solving. In Proceedings of the Fourth National Conference on Artificial Intelligence, 49–54. Menlo Park, Calif.: AAAI Press.

University Technical Report

Rice, J. 1986. Poligon: A System for Parallel Problem Solving, Technical Report, KSL-86-19, Dept. of Computer Science, Stanford Univ.

Dissertation or Thesis

Clancey, W. J. 1979. Transfer of Rule-Based Expertise through a Tutorial Dialogue. Ph.D. diss., Dept. of Computer Science, Stanford Univ., Stanford, Calif.

Forthcoming Publication

Clancey, W. J. 2021. The Engineering of Qualitative Models. Forthcoming.

For the most up to date version of the AAAI reference style, please consult the *AI Magazine* Author Guidelines at https://aaai.org/ojs/index.php/aimagazine/about/submissions#authorGuidelines

arXiv:1408.5882

Yoon Kim. 2014. Convolutional Neural Networks for Sentence Classification. arXiv:1408.5882.

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LATEX is a difficult program to master. If you've used that software, and this document didn't help or some items were not explained clearly, we recommend you read Michael Shell's excellent document (testflow doc.txt V1.0a 2002/08/13) about obtaining correct PS/PDF output on LATEX systems. (It was written for another purpose, but it has general application as well). It is available at www.ctan.org in the tex-archive.

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Thank you for reading these instructions carefully. We look forward to receiving your electronic files!