

# 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. Gazette is very useful when doing NER, however, most of the current method use it in word embedding format, which will bring out the case, we need to retrain model when the word in gazette is greatly changed. In this paper, we propose a conception, called Outer Dictionary(OD) LSTM, which means to use the outer type info of gazette for each word, without using the specific word. Experiments shows it useful when doing NER task, and achieve a great improvement on task with which gazette is heavily depended on.

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\usepackage{graphicx}
\urlstyle{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
% (including, but not limited to
% authblk, caption, CJK, float, fullpage, geometry,
% hyperref, layout, nameref, natbib, savetrees,
% setspace, titlesec, tocbibind, ulem)
% 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
% pdfinfo script and must not be removed.
%
\pdfinfo{
/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\\
Address line\\
\ And\\
Author 3\\
Address line\\
Address line
}\\}
```

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```
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\maketitle
\begin{abstract}
%...
\end{abstract}
```

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```
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...\\
\bibliography{Bibliography-File}\\
\bibliographystyle{aaai}\\
\end{document}\\
```

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<code>\addtolength</code>	<code>\baselinestretch</code>	<code>\belowcaption</code>	<code>\belowdisplay</code>
<code>\break</code>	<code>\clearpage</code>	<code>\clip</code>	<code>\columnsep</code>
<code>\float</code>	<code>\input</code>	<code>\input</code>	<code>\linespread</code>
<code>\newpage</code>	<code>\pagebreak</code>	<code>\renewcommand</code>	<code>\setlength</code>
<code>\text height</code>	<code>\tiny</code>	<code>\top margin</code>	<code>\trim</code>
<code>\vskip{-</code>	<code>\vspace{-</code>		

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

<code>authblk</code>	<code>babel</code>	<code>caption</code>	<code>cjk</code>
<code>dvips</code>	<code>epsf</code>	<code>epsfig</code>	<code>euler</code>
<code>float</code>	<code>fullpage</code>	<code>geometry</code>	<code>graphics</code>
<code>hyperref</code>	<code>layout</code>	<code>linespread</code>	<code>lmodern</code>
<code>maltepaper</code>	<code>natbib</code>	<code>navigator</code>	<code>pdfcomment</code>
<code>psfig</code>	<code>pstricks</code>	<code>tlenc</code>	<code>titlesec</code>
<code>tocbind</code>	<code>ulem</code>		

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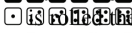
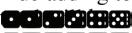
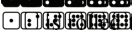
if there are no  showing, add the sum to their turn total. At each decision point, a player may continue to roll or stop. If they decide to stop, they add their turn total to their total score and then it becomes the opponent's turn. Otherwise, they roll dice again  continue adding to their turn total.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

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```
\author{Author 1, ... Author n\\
Address line \\ ... \\ Address line}
```

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```
\author{Author 1} ... \\
{\bf \Large Author ... Author}\\
Address line \\ ... \\ Address line
}
```

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```
\author{Author 1\\ Address line \\ ... \\ Address line
\And ... \And Author n\\
Address line\\ ... \\ Address line}
```

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AuthorTwo,\textsuperscript{\rm 2}
AuthorThree,\textsuperscript{\rm 3}
{\bf \Large AuthorFour,\textsuperscript{\rm 4}}
```

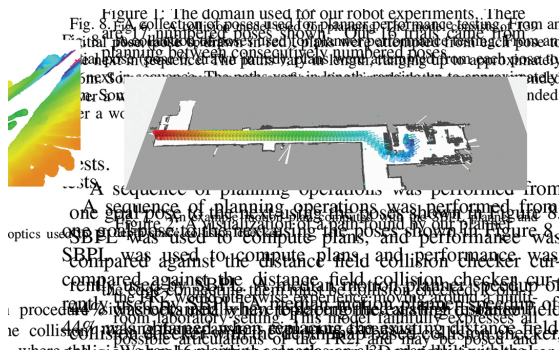


Figure 1: The domain used for our robot experiments. There are 1000 points in the environment, and the path is shown in yellow. The path is shown in yellow, and the environment is shown in gray. The path is shown in yellow, and the environment is shown in gray. The path is shown in yellow, and the environment is shown in gray.

**Grid Search Domain**  
**B. View Selection**  
 In these experiments, we ran our planner on a much larger set of the environment. The environment was divided into a grid of cells, and the planner was run on each cell. The only difference between the two experiments was the number of cells. The number of cells was 1000 in the first experiment and 10000 in the second experiment. The only difference between the two experiments was the number of cells. The number of cells was 1000 in the first experiment and 10000 in the second experiment.

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\textsuperscript{\rm 3}AffiliationThree\n
\textsuperscript{\rm 4}AffiliationFour,
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```
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```

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```
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### **Acknowledgments**

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