

1 Example Section
1.1 Example Subsection
1.1.1 Example Subsubsection

This is a template for cheatsheets that compiles with PdfLaTeX. Please refer to the cheatsheet.sty file for style settings and the cheatsheet.tex or PDF file for the main document structure. In this cheatsheet, we demonstrate various features provided by the template.

2 Basic Text Formatting

This is bold text, this is italic text (emph text), this is underlined text, this is SMALL CAPS text, and this is monospaced text.

We use the enumitem package to make itemize lists and enumerate lists more compact.

- Item 1
- Item 2
- Item 2.1
- Item 2.2
- Item 2.2.1
- Item 2.2.2
- Item 3

- First
- Second
- Third

3 Math Mode Example

Inline math: Attention(Q, K, V) = Softmax(QK^T / sqrt(d_k))V.

Display math:

Attention(Q, K, V) = Softmax(QK^T / sqrt(d_k))V

align environment:

MultiHead(Q, K, V) = Concat(head_1, ..., head_h)W^O

where head_i = Attention(QW_i^Q, KW_i^K, VW_i^V)

equation environment with numbering:

FFN(x) = max(0, xW_1 + b_1)W_2 + b_2 (1)

dcases environment:

f(x) = { e^-1/x, x > 0; 0, x <= 0 }

Equation in box using csbox command:

Attention(Q, K, V) = Softmax(QK^T / sqrt(d_k))V (2)

4 Code Listings

- Inline code (without colors): \texttt{print("Hello World")}
- Inline code (with colors, default Python): \code{print("Hello World")}
- Code block using lstlisting environment:

```
#include <stdio.h>
int main() {
    printf("Hello, World!\n");
    return 0;
}
```

```
5 }
Code block using codef command to include from files (default Python):
1 import torch.nn as nn
2 import torch.nn.functional as F
3
4 class SimpleNN(nn.Module):
5     def __init__(self, input_size=10, hidden_size=50, output_size=2):
6         super(SimpleNN, self).__init__()
7         self.fc1 = nn.Linear(input_size, hidden_size)
8         self.fc2 = nn.Linear(hidden_size, output_size)
9
10    def forward(self, x):
11        x = F.relu(self.fc1(x))
12        x = self.fc2(x)
13        return x
1
2 \codef{code-example.py}
% \codef[python]{code-example.py}
```

5 Tables & Figures

Use cstable to make tables.

Header 1	Header 2
Row 1, Col 1	This is some text in column 2 that will automatically wrap to fit the column width.
Row 2, Col 1	Another row with more text to demonstrate text wrapping in the table cell.

```
1 \cstable{c X}{
2 \toprule
3 \textbf{Header 1} & \textbf{Header 2} \\
4 \midrule
5 Row 1, Col 1 & This is some text in column 2 that
6 will automatically wrap to fit the column
7 width. \\
8 \midrule
9 Row 2, Col 1 & Another row with more text to
10 demonstrate text wrapping in the table cell.
11 \\
12 \bottomrule
13 }
```

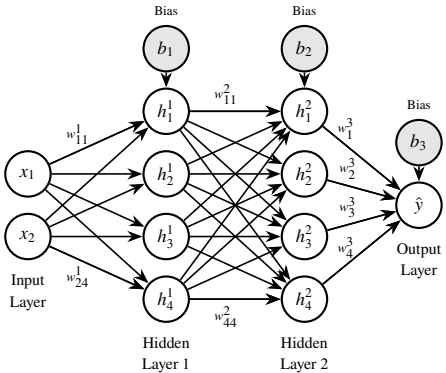
Use csfig to include figures.



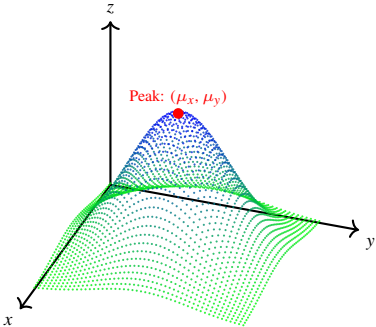
```
1 \csfig{fig-example.png}
```

6 Others

This is an example of a TODO note:
TODO! Finish writing this section.
TikZ example:



3D Plot using TikZ:



7 The Markdown File Input

8 The Second-level Heading

8.1 This is a third-level heading

Here is some sample markdown content for the second part of the cheatsheet template. You can add more sections, lists, code snippets, and other markdown elements as needed.

Note:

- Enable the markdown package in the cheatsheet.sty file to use markdown features.
- The detailed instructions are provided in the cheatsheet.sty comments.
- A directory of _markdown_<texfilename> will be created to store intermediate files during compilation. You can safely delete this directory after compilation if needed.
- For the percentage signs (%) in Markdown, you may need to escape them as \% to avoid L^A_T_E_X compilation problems.

Attention(Q, K, V) = softmax(QK^T / sqrt(d_k))V

- First ordered item W_i^(l)
- Second ordered item
- Subitem 2.1
- Subitem 2.2

```
1 #include <stdio.h>
2 int main() {
3     printf("Hello, World!\n");
4     return 0;
5 }
```

Here is a simple table:

Header 1	Header 2	Header 3
Row 1	Data 1	Data 2
Row 2	Data 3	Data 4
Row 3	Data 5	Data 6

This is a blockquote example. You can use blockquotes to highlight important informations.

A horizontal rule follows:

The end of the markdown content for this cheatsheet template.