

# ML4H 2026 Template

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## Abstract

This is the abstract for this article. If you are making your code available, *do not link to it in the abstract since many indexing services will automatically remove or redact the link*. Instead, we are requiring every paper to have an initial statement on data and code availability right after the abstract.

**Keywords:** List of keywords

This is a sample article that uses the `jmlr` class with the `wcp` class option. Please follow the guidelines in this sample document as it can help to reduce complications when combining the articles into a book. Please avoid using obsolete commands, such as `\rm`, and obsolete packages, such as `epsfig`.<sup>1</sup> Some packages that are known to cause problems for the production editing process are checked for by the `jmlr` class and will generate an error. (If you want to know more about the production editing process, have a look at the video tutorials for the production editors at <http://www.dickimaw-books.com/software/makejmlrbookgui/videos/>.)

Please also ensure that your document will compile with PDF<sup>A</sup>TEX. If you have an error message that's puzzling you, first check for it at the UK TUG FAQ <https://texfaq.org/FAQ-man-latex>. If that doesn't help, create a minimal working example (see <https://www.dickimaw-books.com/latex/minexample/>) and post to somewhere like T<sub>E</sub>X on StackExchange (<http://tex.stackexchange.com/>) or the L<sup>A</sup>T<sub>E</sub>X Community Forum (<http://www.latex-community.org/forum/>).

NOTE:

This is an numbered theorem-like environment that was defined in this document's preamble.

## 1. Introduction

**Instructions** This is the template for submissions to the **Unspecified Track** for the Machine Learning for Health (ML4H) symposium 2026. Please note the following requirements:

1. Submissions to the Unspecified Track are unknown page limit.
2. Please use the packages automatically loaded (`amsmath`, `amssymb`, `natbib`, `graphicx`, `url`, `algorithm2e`) to manage references, write equations, and include figures and algorithms. The use of different packages could create problems in the generation of the camera-ready version. Please follow the example provided in this file.
3. References must be included in a `.bib` file.
4. Please write your paper in a single `.tex` file.
5. For required sections and writing guidelines please consult the official *ML4H 2026 Call for Participation* at <https://ahli.cc/ml4h/call-for-papers/>.

### 1.1. Sub-sections

Sub-sections are produced using `\subsection`.

#### 1.1.1. SUB-SUB-SECTIONS

Sub-sub-sections are produced using `\subsubsection`.

**Sub-sub-sub-sections** Sub-sub-sub-sections are produced using `\paragraph`. These are unnumbered with a running head.

**Sub-sub-sub-sub-sections** Sub-sub-sub-sub-sections are produced using `\subparagraph`. These are unnumbered with a running head.

1. See <http://www.ctan.org/pkg/l2tabu>

## 2. Cross-Referencing

Always use `\label` and `\ref` (or one of the commands described below) when cross-referencing. For example, the next section is Section 3 but you can also refer to it using Section 3. The `jmlr` class provides some convenient cross-referencing commands: `\sectionref`, `\equationref`, `\tableref`, `\figureref`, `\algorithmref`, `\theoremref`, `\lemmaref`, `\remarkref`, `\corollaryref`, `\definitionref`, `\conjectureref`, `\axiomref`, `\exempleref` and `\appendixref`. The argument of these commands may either be a single label or a comma-separated list of labels. Examples:

Referencing sections: Section 3 or Sections 1 and 3 or Sections 1, 3, 5.1 and 5.2.

Referencing equations: Equation (1) or Equations (1) and (3) or Equations (1), (2), (3) and (4).

Referencing tables: Table 1 or Tables 1 and 2 or Tables 1, 2 and 3.

Referencing figures: Figure 1 or Figures 1 and 2 or Figures 1, 2 and 3 or Figures 3(a) and 3(b).

Referencing algorithms: Algorithm 1 or Algorithms 1 and 2 or Algorithms 1, 2 and 3.

Referencing theorem-like environments: Theorem 1, Lemma 2, Remark 3, Corollary 4, Definition 5, Conjecture 6, Axiom 7 and Example 1.

Referencing appendices: Appendix A or Appendices A and B.

## 3. Equations

The `jmlr` class loads the `amsmath` package, so you can use any of the commands and environments defined there. (See the `amsmath` documentation for further details.<sup>2</sup>)

Unnumbered single-lined equations should be displayed using `\[` and `\]`. For example:

$$E = mc^2$$

or you can use the `displaymath` environment:

$$E = mc^2$$

Numbered single-line equations should be displayed using the `equation` environment. For example:

$$\cos^2 \theta + \sin^2 \theta \equiv 1 \quad (1)$$

2. Either `texdoc amsmath` or <http://www.ctan.org/pkg/amsmath>

This can be referenced using `\label` and `\equationref`. For example, Equation (1).

Multi-lined numbered equations should be displayed using the `align` environment.<sup>3</sup> For example:

$$\begin{aligned} f(x) &= x^2 + x & (2) \\ f'(x) &= 2x + 1 & (3) \end{aligned}$$

Unnumbered multi-lined equations can be displayed using the `align*` environment. For example:

$$\begin{aligned} f(x) &= (x + 1)(x - 1) \\ &= x^2 - 1 \end{aligned}$$

If you want to mix numbered with unnumbered lines use the `align` environment and suppress unwanted line numbers with `\nonumber`. For example:

$$\begin{aligned} y &= x^2 + 3x - 2x + 1 \\ &= x^2 + x + 1 & (4) \end{aligned}$$

An equation that is too long to fit on a single line can be displayed using the `split` environment. Text can be embedded in an equation using `\text` or `\intertext` (as used in Theorem 1). See the `amsmath` documentation for further details.

### 3.1. Operator Names

Predefined operator names are listed in Table 1. For additional operators, either use `\operatorname`, for example `\operatorname{var}(X)` or declare it with `\DeclareMathOperator`, for example

```
\DeclareMathOperator{\var}{var}
```

and then use this new command. If you want limits that go above and below the operator (like `\sum`) use the starred versions (`\operatorname*` or `\DeclareMathOperator*`).

## 4. Vectors and Sets

Vectors should be typeset using `\vec`. For example  $\mathbf{x}$ . (The original version of `\vec` can also be accessed using `\orgvec`, for example  $\vec{x}$ .) The `jmlr` class also provides `\set` to typeset a set. For example  $\mathcal{S}$ .

3. For reasons why you shouldn't use the obsolete `eqnarray` environment, see Lars Madsen, *Avoid eqnarray!* TUGboat 33(1):21–25, 2012.

Table 1: Predefined Operator Names (taken from amsmath documentation)

<code>\arccos</code>	arccos	<code>\deg</code>	deg	<code>\lg</code>	lg	<code>\projlim</code>	projlim
<code>\arcsin</code>	arcsin	<code>\det</code>	det	<code>\lim</code>	lim	<code>\sec</code>	sec
<code>\arctan</code>	arctan	<code>\dim</code>	dim	<code>\liminf</code>	liminf	<code>\sin</code>	sin
<code>\arg</code>	arg	<code>\exp</code>	exp	<code>\limsup</code>	limsup	<code>\sinh</code>	sinh
<code>\cos</code>	cos	<code>\gcd</code>	gcd	<code>\ln</code>	ln	<code>\sup</code>	sup
<code>\cosh</code>	cosh	<code>\hom</code>	hom	<code>\log</code>	log	<code>\tan</code>	tan
<code>\cot</code>	cot	<code>\inf</code>	inf	<code>\max</code>	max	<code>\tanh</code>	tanh
<code>\coth</code>	coth	<code>\injlim</code>	injlim	<code>\min</code>	min		
<code>\csc</code>	csc	<code>\ker</code>	ker	<code>\Pr</code>	Pr		
		<code>\varlimsup</code>	$\overline{\lim}$	<code>\varinjlim</code>	$\varinjlim$		
		<code>\varliminf</code>	$\underline{\lim}$	<code>\varprojlim</code>	$\varprojlim$		

## 5. Floats

Floats, such as figures, tables and algorithms, are moving objects and are supposed to float to the nearest convenient location. Please don't force them to go in a particular place. In general it's best to use the `htbp` specifier and don't put the figure or table in the middle of a paragraph (that is make sure there's a paragraph break above and below the float). Floats are supposed to have a little extra space above and below them to make them stand out from the rest of the text. This extra spacing is put in automatically and shouldn't need modifying.

If your article will later be reprinted in the Challenges for Machine Learning, please be aware that the CiML books use a different paper size, so if you want to resize any images use a scale relative to the line width (`\linewidth`), text width (`\textwidth`) or text height (`\textheight`).

To ensure consistency, please *don't* try changing the format of the caption by doing something like:

```
\caption{\textit{A Sample Caption.}}
```

or

```
\caption{\em A Sample Caption.}
```

You can, of course, change the font for individual words or phrases, for example:

```
\caption{A Sample Caption With  
Some \emph{Emphasized Words}.}
```

### 5.1. Tables

Tables should go in the `table` environment. Within this environment use `\floatconts` (defined by `jmlr`)

to set the caption correctly and center the table contents. The location of the caption depends on the `tablecaption` setting in the document class options.

Table 2: An Example Table

Dataset	Result
Data1	0.12345
Data2	0.67890
Data3	0.54321
Data4	0.09876

If you want horizontal rules you can use the `booktabs` package which provides the commands `\toprule`, `\midrule` and `\bottomrule`. For example, see Table 3.

Table 3: A Table With Horizontal Lines

Dataset	Result
Data1	0.12345
Data2	0.67890
Data3	0.54321
Data4	0.09876

If you really want vertical lines as well, you can't use the `booktabs` commands as there'll be some unwanted gaps. Instead you can use L<sup>A</sup>T<sub>E</sub>X's `\hline`, but the rows may appear a bit cramped. You can add extra space above or below a row using `\abovestrut` and `\belowstrut`. For example, see Table 4. However, you might want to read the `booktabs` documentation regarding the use of vertical lines.

Table 4: A Table With Horizontal and Vertical Lines

Dataset	Result
Data1	0.12345
Data2	0.67890
Data3	0.54321
Data4	0.09876

178 If you want to align numbers on their decimal  
 179 point, you can use the `siunitx` package. For further  
 180 details see the `siunitx` documentation<sup>4</sup>.

181 If the table is too wide, you can adjust the inter-  
 182 column spacing by changing the value of `\tabcolsep`.  
 183 For example:

184 `\setlength{\tabcolsep}{3pt}`

185 If the table is very wide but not very long, you can  
 186 use the `sidewaystable` environment defined in the  
 187 `rotating` package (so use `\usepackage{rotating}`).  
 188 If the table is too long to fit on a page, you can use  
 189 the `longtable` environment defined in the `longtable`  
 190 package (so use `\usepackage{longtable}`).

## 191 5.2. Figures

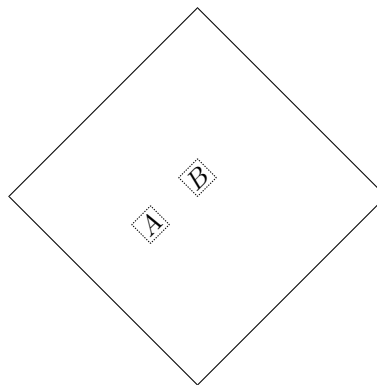
192 Figures should go in the `figure` environment. Within  
 193 this environment, use `\floatconts` to correctly po-  
 194 sition the caption and center the image. Use  
 195 `\includegraphics` for external graphics files but  
 196 omit the file extension. Do not use `\epsfig` or  
 197 `\psfig`. If you want to scale the image, it's better  
 198 to use a fraction of the line width rather than an  
 199 explicit length. For example, see Figure 1.



Figure 1: Example Image

200 If your image is made up of  $\text{\LaTeX}$  code (for ex-  
 201 ample, commands provided by the `pgf` package) you  
 202 can include it using `\includeteximage` (defined by  
 203 the `jmlr` class). This can be scaled and rotated in the  
 204 same way as `\includegraphics`. For example, see  
 205 Figure 2.

4. Either `texdoc siunitx` or <http://www.ctan.org/pkg/siunitx>

Figure 2: Image Created Using  $\text{\LaTeX}$  Code

If the figure is too wide to fit on the page, you can  
 use the `sidewaysfigure` environment defined in the  
`rotating` package.

Don't use `\graphicspath`.<sup>5</sup> If the im-  
 ages are contained in a subdirectory, specify  
 this when you include the image, for example  
`\includegraphics{figures/mypic}`.

### 5.2.1. SUB-FIGURES

Sub-figures can be created using `\subfigure`, which  
 is defined by the `jmlr` class. The optional argument  
 allows you to provide a subcaption. The label should  
 be placed in the mandatory argument of `\subfigure`.  
 You can reference the entire figure, for example Fig-  
 ure 3, or you can reference part of the figure using  
`\figureref`, for example Figure 3(a). Alternatively  
 you can reference the subfigure using `\subfigref`, for  
 example (a) and (b) in Figure 3.

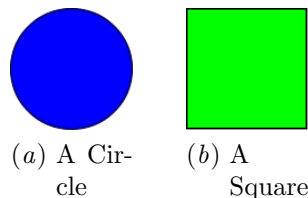


Figure 3: An Example With Sub-Figures.

5. This is specific to the `jmlr` class, not a general recommen-  
 dation. The main file that generates the proceedings or  
 the CiML book is typically in a different directory to the  
 imported articles, so it modifies the graphics path when it  
 imports an article.

223 By default, the sub-figures are aligned on the base-  
 224 line. This can be changed using the second optional  
 225 argument of `\subfigure`. This may be `t` (top), `c`  
 226 (centered) or `b` (bottom). For example, the subfig-  
 227 ures (a) and (b) in Figure 4 both have `[c]` as the  
 228 second optional argument.

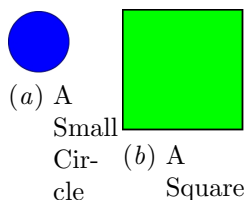


Figure 4: Another Example With Sub-Figures.

### 229 5.3. Sub-Tables

230 There is an analogous command `\subtable` for sub-  
 231 tables. It has the same syntax as `\subfigure` de-  
 232 scribed above. You can reference the table using  
 233 `\tableref`, for example Table 5 or you can refer-  
 234 ence part of the table, for example Table 5(a).  
 235 Alternatively you can reference the subtable using  
 236 `\subtabref`, for example (a) and (b) in Table 5.

Table 5: An Example With Sub-Tables

(a)		(b)	
A	B	C	D
1	2	3	4
		5	6

237 By default, the sub-tables are aligned on the top.  
 238 This can be changed using the second optional argu-  
 239 ment of `\subtable`. This may be `t` (top), `c` (cen-  
 240 tered) or `b` (bottom). For example, the sub-tables  
 241 (a) and (b) in Table 6 both have `[c]` as the second  
 242 optional argument.

Table 6: Another Example With Sub-Tables

(a)		(b)	
A	B	C	D
1	2	3	4
		5	6

### 5.4. Algorithms

243 Enumerated textual algorithms can be displayed us-  
 244 ing the `algorithm` environment. Within this envi-  
 245 onment, use `\caption` to set the caption and you  
 246 can use an `enumerate` or nested `enumerate` environ-  
 247 ments. For example, see Algorithm 1. Note that  
 248 algorithms float like figures and tables.  
 249

---

#### Algorithm 1: The Gauss-Seidel Algorithm

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1. For  $k = 1$  to maximum number of iterations
  - (a) For  $i = 1$  to  $n$ 
    - i.  $x_i^{(k)} = \frac{b_i - \sum_{j=1}^{i-1} a_{ij}x_j^{(k)} - \sum_{j=i+1}^n a_{ij}x_j^{(k-1)}}{a_{ii}}$
    - ii. If  $\|\mathbf{x}^{(k)} - \mathbf{x}^{(k-1)}\| < \epsilon$ , where  $\epsilon$  is a specified stopping criteria, stop.

If you'd rather have the same numbering through-  
 out the algorithm but still want the convenient in-  
 dentation of nested `enumerate` environments, you can  
 use the `enumerate*` environment provided by the `jmlr`  
 class. For example, see Algorithm 2.

---

#### Algorithm 2: Moore's Shortest Path

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Given a connected graph  $G$ , where the length of each edge is 1:

1. Set the label of vertex  $s$  to 0
2. Set  $i = 0$ 
  3. Locate all unlabelled vertices adjacent to a vertex labelled  $i$  and label them  $i + 1$
  4. If vertex  $t$  has been labelled,
    - the shortest path can be found by backtracking, and the length is given by the label of  $t$ .
    - otherwise
      - increment  $i$  and return to step 3

Pseudo code can be displayed using the `algorithm2e`  
 environment. This is defined by the `algorithm2e` package (which is automatically  
 loaded) so check the `algorithm2e` documentation for  
 further details.<sup>6</sup> For an example, see Algorithm 3.

---

6. Either `texdoc algorithm2e` or <http://www.ctan.org/pkg/algorithm2e>

**Algorithm 3:** Computing Net Activation**Input:**  $x_1, \dots, x_n, w_1, \dots, w_n$ **Output:**  $y$ , the net activation $y \leftarrow 0;$ **for**  $i \leftarrow 1$  **to**  $n$  **do**|  $y \leftarrow y + w_i * x_i;$ **end**Therefore true for  $n = 2$ . Now assume true for  $n = k$ :

$$B^k \xi = \lambda^k \xi$$

premultiply by  $B$ :

$$\begin{aligned}
BB^k \xi &= B\lambda^k \xi \\
\Rightarrow B^{k+1} \xi &= \lambda^k B\xi \\
&= \lambda^k \lambda \xi && \text{since } B\xi = \lambda \xi \\
&= \lambda^{k+1} \xi
\end{aligned}$$

Therefore true for  $n = k+1$ . Therefore, by induction, true for all  $n$ . ■**6. Description Lists**

The `jmlr` class also provides a description-like environment called `altdescription`. This has an argument that should be the widest label in the list. Compare:

**add** A method that adds two variables.

**differentiate** A method that differentiates a function.

with

**add** A method that adds two variables.

**differentiate** A method that differentiates a function.

**Lemma 2 (A Sample Lemma)** This is a lemma.**Remark 3 (A Sample Remark)** This is a remark.**Corollary 4 (A Sample Corollary)** This is a corollary.**Definition 5 (A Sample Definition)** This is a definition.**Conjecture 6 (A Sample Conjecture)** This is a conjecture.**Axiom 7 (A Sample Axiom)** This is an axiom.**Example 1 (An Example)** This is an example.**7. Theorems, Lemmas etc**

The following theorem-like environments are predefined by the `jmlr` class: `theorem`, `example`, `lemma`, `proposition`, `remark`, `corollary`, `definition`, `conjecture` and `axiom`. You can use the `proof` environment to display the proof if need be, as in [Theorem 1](#).

**Theorem 1 (Eigenvalue Powers)** If  $\lambda$  is an eigenvalue of  $B$  with eigenvector  $\xi$ , then  $\lambda^n$  is an eigenvalue of  $B^n$  with eigenvector  $\xi$ .

**Proof** Let  $\lambda$  be an eigenvalue of  $B$  with eigenvector  $\xi$ , then

$$B\xi = \lambda\xi$$

premultiply by  $B$ :

$$\begin{aligned}
BB\xi &= B\lambda\xi \\
\Rightarrow B^2\xi &= \lambda B\xi \\
&= \lambda\lambda\xi && \text{since } B\xi = \lambda\xi \\
&= \lambda^2\xi
\end{aligned}$$

**8. Color vs Grayscale**

It's helpful if authors supply grayscale versions of their images in the event that the article is to be incorporated into a black and white printed book. With external PDF, PNG or JPG graphic files, you just need to supply a grayscale version of the file. For example, if the file is called `myimage.png`, then the gray version should be `myimage-gray.png` or `myimage-gray.pdf` or `myimage-gray.jpg`. You don't need to modify your code. The `jmlr` class checks for the existence of the grayscale version if it is print mode (provided you have used `\includegraphics` and haven't specified the file extension).

You can use `\ifprint` to determine which mode you are in. For example, in [Figure 1](#), the purple ellipse represents an input and the yellow ellipse represents an output. Another example: **important text!**

317 You can use the class option `gray` to see how the  
 318 document will appear in gray scale mode. `Colored`  
 319 `text` will automatically be converted to gray scale in  
 320 print mode.

321 The `jmlr` class loads the `xcolor` package, so you can  
 322 also define your own colors. For example: `XYZ`.

323 The `xcolor` class is loaded with the `x11names` op-  
 324 tion, so you can use any of the `x11` predefined colors  
 325 (listed in the `xcolor` documentation<sup>7</sup>).

## 326 9. Citations and Bibliography

327 The `jmlr` class automatically loads `natbib` and auto-  
 328 matically sets the bibliography style, so you don't  
 329 need to use `\bibliographystyle`. This sample file  
 330 has the citations defined in the accompanying Bib-  
 331 TeX file `jmlr-sample.bib`. For a parenthetical cita-  
 332 tion use `\citep`. For example (Guyon and Elisseff,  
 333 2003). For a textual citation use `\citet`. For exam-  
 334 ple Guyon et al. (2007). Both commands may take a  
 335 comma-separated list, for example Guyon and Elis-  
 336 seeff (2003); Guyon et al. (2007).

337 These commands have optional arguments and  
 338 have a starred version. See the `natbib` documenta-  
 339 tion for further details.<sup>8</sup>

340 The bibliography is displayed using  
 341 `\bibliography`.

## 342 Acknowledgments

343 Acknowledgments go here *but should only appear in*  
 344 *the camera-ready version of the paper if it is ac-*  
 345 *cepted*. Acknowledgments do not count toward the  
 346 paper page limit.

## 347 References

348 I. Guyon and A. Elisseff. An introduction to variable  
 349 and feature selection. *JMLR*, 3:1157–1182, March  
 350 2003.

351 I. Guyon, C. Aliferis, and A. Elisseff. Causal feature  
 352 selection. Technical report, Clopinet, 2007.

## 353 Appendix A. First Appendix

354 This is the first appendix.

## Appendix B. Second Appendix

This is the second appendix.

355

356

7. either `texdoc xcolor` or <http://www.ctan.org/pkg/xcolor>

8. Either `texdoc natbib` or <http://www.ctan.org/pkg/natbib>