The Art and Science of \LaTeX\ Posters

Ada Lovelace  Mary Somerville (Advisor)
Computer Science Department, Union College

Abstract
\LaTeX\ is awesome! You should definitely use it to make your poster. In principle, anything that you could do in an article typeset in \LaTeX\ you could also do in a poster. This template contains examples of how display various types of content on a \LaTeX\ poster. This template only serves a suggestion about how to organize and present your research using \LaTeX. This poster has more words than yours should. This maybe the only section of your poster that your viewer remembers, so make it count.

Introduction, Motivation, and Background
The goal of this section is to tell a story that leads the reader guess your research question is before you write it. This is best accomplished by starting from some general topic that most people in CS are already aware of and then bringing in additional facts and context that lead to your specific problem. This could take a while. You should include some citations backing up your claim so that the viewer is aware you’re not just making up “facts”. You might even use a figure to drive your point home.

Figure 1: Example of how not to write your introduction [2].

Talk about what other scientists have done, in a way that will make it easy to determine what is similar and different about what you’re doing.

By the end of your introduction, the viewer is chomping at the bit to know what your research question is, you shouldn’t disappoint them.

Question
How many CSC students will develop their senior thesis posters in \LaTeX? 

Methods
Here you should outline your approach for answering your research question. While this can be handled in prose, it can be done more effectively as
- a list,
- an outline,
- an algorithm, or
- a diagram.

It’s good to talk about important assumptions you may be making, or the rationale behind your experiment’s design. You should also talk about any data sets or software you might be using.

Results
Here you describe the results of following your methodology. In CSC 498, you may only have preliminary results. Discuss that here. You might talk about difficulties encountered while following your method. It should be clear from this section and the methods section what you actually did. Tables and graphs are appropriate here. Make sure to title, label axes, and give units where necessary.

<table>
<thead>
<tr>
<th>#</th>
<th>Data (Gb)</th>
<th>Poster Size (Mb)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>0.001</td>
<td>15.9</td>
</tr>
<tr>
<td>2</td>
<td>380.130</td>
<td>32</td>
</tr>
<tr>
<td>3</td>
<td>0.100</td>
<td>0.001</td>
</tr>
<tr>
<td>4</td>
<td>0.092</td>
<td>0.296</td>
</tr>
</tbody>
</table>

Table 1: Amount of data generated and poster size for four imaginary senior project students. * indicates data usage before CSC account suspended.

Analysis
Discuss how you analyzed your data. For particularly complex analyses you might include an algorithm or equations describing them.

\begin{verbatim}
Input : \( \delta \geq 0 \), indicating the quality of poster required (larger is better).
Output: A string containing the \LaTeX source of a poster with quality at least \( \delta \).
1 \( \text{post} \)er = "";
2 \text{while } \text{QUALITY}(\text{poster}) < \delta \text{ do}
3 \text{poster} = \text{REWRITE}(\text{poster});
4 \text{Run make;}
5 \text{while CompileError(\text{poster}) do}
6 \text{Decrement poster;}
7 \text{Run make;}
8 \text{end}
9 \text{end}
10 \text{return poster;}
\end{verbatim}

For CSC 498, this is more likely to be a todo list or sequence of milestones for completing the project in CSC 499.

Conclusions
Here you describe what conclusions the audience should reach from your analysis. Did you answer your research question? Discuss any threats to validity in your method, data, or analysis, or any assumptions that were important to reach your conclusions. What would you do differently if you could do it again, or work on this project for another term (or in graduate school)? For example, I’d like to add a \texttt{tikz} example to this poster like the one below.

\begin{tikzpicture}
\node (1) at (0,0) {0};
\node (2) at (2,0) {1.6};
\node (3) at (4,0) {0.1};
\node (4) at (6,0) {0};
\node (5) at (-2,0) {1};

\draw[->] (1) edge (2);
\draw[->] (2) edge (3);
\draw[->, bend right=30] (4) edge (5);
\draw[->, bend right=30] (5) edge (1);
\end{tikzpicture}

Acknowledgments
This section is optional. Here you should thank anyone other than your advisor that provided help to you in your project. This can be other students, faculty, or staff. If you received an SRG to complete your project that should be mentioned here.

For example, I’d like to thank my colleagues for giving me feedback on my drafts of this poster template, and David Frey for making sure it will print appropriately.

References