gradstudentresume: A document class for graduate student CVs

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Abstract

Despite casting a rather wide net for a template for academic CVs, I was unable to find one that caught my fancy. I therefore chose to write my own document class. This paper aims to introduce this document class as well as provide some practical tips on writing a document class in LaTeX.

1 Introduction

Despite the widespread usage of LaTeX among mathematicians, statisticians, economists, computer scientists, and others with a quantitative bent, the community of LaTeX contributors is relatively small. This was borne out during my quest for a suitable CV template. After being unable to find one to my liking, I felt compelled to write a document class of my own and upload it onto CTAN. Since I am a ten-finger clinger to the notion that contributions should be accompanied by appropriate documentation, I decided to submit a paper detailing both the usage of the document class and offering hints on how to write a document class of one's own.

My document class is called `gradstudentresume` and serves as a template for graduate students writing an academic CV. The package is available at `http://ctan.org/pkg/gradstudentresume`.

2 Constructing the document class

Writing an academic CV can be cumbersome due both to the length of such CVs and the repetitive nature of the material. Graduate students often find themselves struggling with constantly formatting line after line. As such, this document class aimed to define environments and commands to make such tasks less repetitive. While we do not need to go over every line in the `.cls` file, some features warrant discussion.

First, despite the availability of the `\smallskip`, `\medskip`, and `\largeskip` commands, I believe that it is important to exercise precise control over the output of these documents. So, the `gradstudentresume` document class contains new commands (namely `\smallspace`, `\medspace`, and `\largespace`) that leave spaces of 1 mm, 3 mm, and 5 mm respectively. Similarly, I defined a new environment `wrapped` which decreases the separation between items in a list. Ordinarily, one would simply use the `itemize` environment but defining one's own environment allows one to exercise far more control over the layout of the desired document.

Figure 1: The first page of my CV, as an example.

Next, the document class contains a new environment called `info` for name, address, etc. Here is its definition:

```
\newenvironment{info}[4]
{\begin{center}
 {\Large \textsc{#1}} \\
 \normalsize \textit{Address}: {#2} \\
 \textit{Telephone}: {#3} \\
 \textit{Email}: {#4}
 \end{center}}
{\largespace}
```

This is an environment with four parameters and centered text. The reader should take care to follow the LaTeX syntax of specifying the number of parameters in square brackets after the `newenvironment` command and then preceding parameter numbers with `#` in the body of the defined environment.

This document class also contains several new commands such as `\sectionrule` (which draws a horizontal line across the page), `\undergrad`, `\grad`, `\sectionheading`, and `\subsectionheading`. These commands all take a varying number of parameters as

arguments. A short sample of the output for my own CV is shown above; for a complete example, readers are advised to read and compile the `example.tex` file included in the package.

Other commands such as `\reference`, `\paper`, and `\presentation` have been defined to help authors avoid the cumbersome process of formatting certain sections repeatedly. For instance, here is the definition of the `\reference` command:

```
\newcommand{\reference}[7]
{\textbf{#1} \\
 {#2}\hfill {Telephone: {#3}} \\
 {#4}\hfill {Email: {#5}} \\
 {#6} \\
 {#7}}
```

Here, the parameters are name (#1), title (#2), telephone number (#3), department (#4), email (#5), school (#6), and address line 2 (#7). This is useful since it eliminates the need for authors to repeatedly format the references they provide. Again, see the `example.tex` file for example usage.

In the same vein, this is the definition for the `\paper` command:

```
\newcommand{\paper}[7]
{{#1} ({#2}). {#3}. \textit{#4, #5}
 ({#6}), {#7}.}
```

Here, parameter 1 is for authors, 2 is for year, 3 is for title, 4 is for journal, 5 is for volume, 6 is for number, and 7 is for pages. Students with many publications will especially appreciate this feature since it eliminates the repetitive task of formatting each publication separately.

Finally, new environments `pres` (presentations) and `desc` (descriptions of job positions, etc.) were defined so that authors need not keep formatting sections that require some elaboration. Here is the definition for `desc`:

```
\newenvironment{desc}[3]
{\noindent\textbf{#1}\hfill {#2} \\
 \textit{#3}
 \begin{wrapped}}
{\end{wrapped}
 \medspace}
```

We see that the `wrapped` environment is used within the `desc` environment. This illustrates how nested environments can be created.

3   Usage

This section shows some examples of the usage of this document class. The goal is to illustrate how several environments and commands can be used in the construction of a resume. For instance, consider:

```
\sectionheading{Teaching}
\subsectionheading{Teaching Assistant}
```

Anagha Kumar

```
\begin{desc}
  {Fundamentals of Statistics}
  {Spring 2013}
  {Professor Jason Roy}
\item{Course for 30 medical residents.}
\item{Graded homework assignments.}
\end{desc}
```

First, we see that the section and subsection are titled "Teaching" and "Teaching Assistant" respectively. Next, we encounter the `desc` environment. The appropriate syntax is `\begin{desc}` with the three arguments `Fundamentals of Statistics`, `Spring 2013`, and `Professor Jason Roy` provided in parentheses immediately after. As noted in the previous section, the body of the `desc` environment contains the nested `wrapped` environment. Here, the items in the itemized list in the above example are spaced more closely than they would have been had they been a part of LaTeX's standard `itemize` environment. Further, there is no need to type `\begin{wrapped}` and `\end{wrapped}` since the `desc` environment's definition already includes them.

Next, we examine the `pres` environment, for presentations. Below is its definition, preceded by the definition for the `presentation` command:

```
\newcommand{\presentation}[4]
{{#1}\hfill {#2} \\
 \textit{#3}\hfill {#4}}
```

```
\newenvironment{pres}[1]
{\textbf{#1}% name of the presentation
 \begin{wrapped}}
{\end{wrapped}
 \smallspace}
```

For the `presentation` command, the 4 parameters are the section of the conference, date, conference name and location respectively. Much like `desc`, the `wrapped` environment is nested in the `pres` environment. Here's an example of its usage:

```
\begin{pres}{Dynamic Documents}
\item\presentation{STAT 701}
  {December 2015}
  {University of Pennsylvania}
  {Philadelphia, PA}}
\end{pres}
```

Again, the user need not specify `\begin{wrapped}` and `\end{wrapped}` when using the `pres` environment since the `wrapped` environment is already included in the definition of `pres`. The reader should also note that the `presentation` command is used within the body of the environment. This is a useful feature since users thereby bypass the need to format each presentation individually and can instead use the command within the body of the environment instead.

The appendix provides definitions for all of the commands and environments in this document class. Again, for an example of a full CV written using this document class, the reader is encouraged to download and run the example.tex file available as part the package, e.g., via http://ctan.org/pkg/gradstudentresume.

4 Discussion

At the risk of preaching to the choir, LATEX is not a tool to be used but a product to be developed. Anybody can install a package somebody else has written or use a document class someone else was ingenious enough to come up with. Therein lies the distinction between producers of knowledge and mere consumers. In separating the chaff from the wheat, the inability to *create* knowledge is perhaps the biggest tell-tale. Thus, my biggest hope in writing this paper is to encourage others to contribute to CTAN.

5 Appendix

```
\newcommand{\smallspace}{\vspace{1mm}}
\newcommand{\medspace}{\vspace{3mm}}
\newcommand{\largespace}{\vspace{5mm}}

\newenvironment{info}[4]
{\begin{center}
  {\Large \textsc{#1}} \\
  \normalsize \textit{Address}: {#2} \\
  \textit{Telephone}: {#3} \\
  \textit{Email}: {#4}
  \end{center}}
{\largespace}
% The parameters are name, address,
% telephone number, and email.

\newenvironment{wrapped}
{\begin{itemize}\setlength{\itemsep}{0pt}}
{\end{itemize}}

\newcommand{\sectionrule}{%
 \noindent\hfil\rule{\textwidth}{.6pt}\hfil
 \vspace{2mm}}

\newcommand{\undergrad}[5]{%
 \noindent
 \textbf{#1}\hfill {#2} \\
 \textit{#3}\hfill {#4} \\
 {\def\honors{#5}\ifx\honors\empty\else
  Graduation Honors: {#5}}\fi}
```

```
\newcommand{\grad}[6]{%
 \noindent
 \textbf{#1}\hfill {#2} \\
 \textit{#3}\hfill {#4} \\
 Thesis: {#5} \\
 Advisor: {#6}}

\newcommand{\sectionheading}[1]{%
 \noindent {\large \textsc{#1}} \\
 \sectionrule}

\newcommand{\subsectionheading}[1]{%
 \noindent {\textsc{#1}}\smallspace}

\newcommand{\reference}[7]{%
 \textbf{#1} \\
 {#2}\hfill {Telephone: {#3}} \\
 {#4}\hfill {Email: {#5}} \\
 {#6} \\
 {#7}}

\newcommand{\paper}[7]{%
 {#1} ({#2}). {#3}.
 \textit{#4, #5} ({#6}), {#7}.}

\newcommand{\myname}{%
 \textbf{Kumar, A.}}
% to be customized for each individual's name

\newcommand{\presentation}[4]{%
 {#1}\hfill{#2} \\
 \textit{#3}\hfill{#4}}

\newenvironment{pres}[1]
{\textbf{#1}% name of the presentation
 \begin{wrapped}}
{% use the presentation command as the argument
 \end{wrapped}
 \smallspace}

\newenvironment{desc}[3]
{\noindent \textbf{#1}\hfill {#2} \\
 \textit{#3}
 \begin{wrapped}}
{\end{wrapped}
 \medspace}
```

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