

Introduction to the `muRL` Package Mailmerge using `R`, `LATEX`, and the Web

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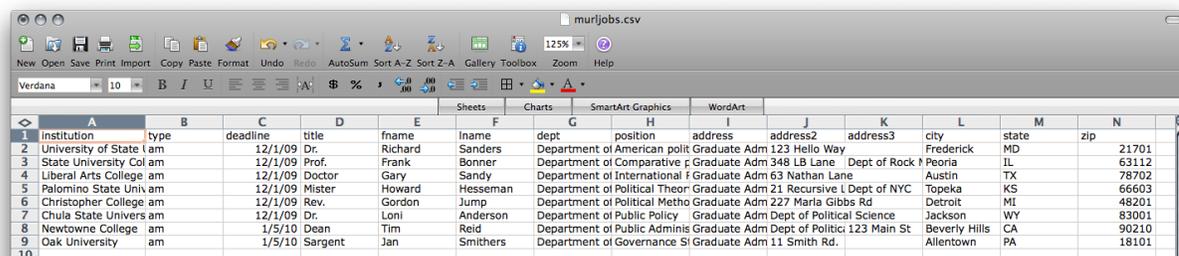
This document describes how to use `muRL` to create beautiful mailmerged letters typeset in `R`. In it we:

1. Prepare the jobs spreadsheet;
2. Create the `TEX` file using `muRL` and `R`;
3. Customize the `TEX` file; and
4. Compile the `TEX` file.

Be sure to include all of the files in the same directory or else point the input commands appropriately. In this example, the user's directory is `/Users/JohnnyF/jobletter/`.

1 Preparing the jobs spreadsheet

In the spreadsheet application of your choosing, enter the mailmerge information. The spreadsheet pictured below is included with `muRL` and is used in the example here.



	A	B	C	D	E	F	G	H	I	J	K	L	M	N	
1	Institution	type	deadline	title	fname	lname	dept	position	address	address2	address3	city	state	zip	
2	University of State	am	12/1/09	Dr.	Richard	Sanders	Department of American	polit	Graduate Adm	123 Hello	Way	Frederick	MD	21701	
3	State University	Col	12/1/09	Prof.	Frank	Bonner	Department of Comparative	p	Graduate Adm	348 LB	Lane	Dept of Rock	Peoria	IL	63112
4	Liberal Arts College	am	12/1/09	Doctor	Gary	Sandy	Department of International	f	Graduate Adm	63 Nathan	Lane	Austin	TX	78702	
5	Palomino State Univ	am	12/1/09	Mister	Howard	Hesseman	Department of Political	Theor	Graduate Adm	21 Recursive	L	Dept of NYC	Topeka	KS	66603
6	Christopher College	am	12/1/09	Rev.	Gordon	Jump	Department of Political	Metho	Graduate Adm	227 Marla	Gibbs	Rd	Detroit	MI	48201
7	Chula State Univers	am	12/1/09	Dr.	Loni	Anderson	Department of Public	Policy	Graduate Adm	Dept of Political	Science	Jackson	WY	83001	
8	Newtowne College	am	1/5/10	Dean	Tim	Reid	Department of Public	Adminis	Graduate Adm	Dept of Politic	123 Main	St	Beverly Hills	CA	90210
9	Oak University	am	1/5/10	Sargent	Jan	Smithers	Department of Governance	SI	Graduate Adm	11	Smith	Rd.	Allentown	PA	18101
10															

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2 Creating the $\text{T}_\text{E}_\text{X}$ file using muRL and R

In R:

```
> library(muRL)
Loading required package: maps
> murljobs <- read.murl("/Users/JohnnyF/jobletter/jobs.csv")
```

The jobs spreadsheet is now loaded into R and ready for the mailmerge. First, we use `zip.plot` to plot the zip codes of our addresses on a map of the U.S. Figure 1 presents that map.

```
> zip.plot(murljobs)
```



Figure 1: Location of mailmerge addresses (by ZIP code)

Since our jobs spreadsheet is already a `muRL` object in R, we can use the `write.murl` command to implement a mailmerge. The result will be a $\text{T}_\text{E}_\text{X}$ file, which will need to be compiled. The file is generated in the working directory (see `getwd()`) of R.

```
> getwd()
[1] "/Users/JohnnyF/jobletter"
> write.murl(murljobs)
Data stored as file 'mailmerge.tex'.
The current working directory is /Users/JohnnyF/jobletter
```

3 Customizing the T_EX file

Using `write.murl`, we create a T_EX file (`mailmerge.tex` is the default filename) in the working directory of R. Open this file using a text editor like `emacs`. Like any T_EX file, `mailmerge.tex` is highly customizable, and the T_EX file contains many annotations to aid the user. The user can specify formatting options like the margin or the font size as well as content like date, the signature, or the text of the letter. For both sets of options, defaults are used if they are not specified by the user.

In the body of `mailmerge.tex` we provide descriptions of various fields that the user can change if they did not already do so using `write.murl`. In the example below, we provide a default date of March 1, 1972. It is unlikely that a user will use this date and so they may replace it with the date of their choosing or use the `\today` command to use today's date.

```
\date{March 1, 1972} %alternatively, can use \date{\today} to specify today's date.
\signature{Johnny Fever} %your name, which will follow the valediction.
```

In addition to the date and signature, the user will almost certain need to specify the return address and the body of the letter (see the help file for `write.murl` for further details).

Of special interest for the mailmerge is the use ability to create labels using the `envlab` package. By default, the package is used and it generates labels based on the Avery® 5164 label format. These labels include barcodes for ZIP codes ensuring prompt and accurate delivery.

4 Compiling the T_EX file

The final step is to compile the T_EX file. Once `mailmerge.tex` is to your specification, you can compile the file. This will result in mailmerged letters typeset by L^AT_EX. For example, if you use pdfLaTeX, the results will be a pdf document of the letters and mailing labels.