

Airbnb Kaggle Challenge: Predicting Rossmann Store Sales

Mingu Jo
University of California, Berkeley

Wonjohn Choi
University of California, Berkeley

1 Abstract

The objective of this project is to predict 6 weeks of daily sales for 1115 Rossmann stores located across Germany using data about stores' past daily sales, competitor, etc (the list of available data will be introduced more in depth later in this paper). The data was provided by Rossmann through Kaggle. The motivation of this project is the following: by reliably predicting daily sales, store managers can create effective staff schedules (by assigning more staffs during busy days). In order to predict daily sales, we first preprocessed the data and applied several methods (multivariate linear regression, random forest, generalized linear regression, etc). Then, we compared the methods' predictive power by computing Root Mean Square Percentage Error (RMSPE). We found that TODO:X performed the best with a RMSPE score of TODO:XXX.

2 Introduction

A paragraph of text goes here. Lots of text. Plenty of interesting text.

More fascinating text. Features¹ galore, plethora of promises.

3 Methods

Some embedded literal typset code might look like the following :

```
int wrap_fact(ClientData clientData,
              Tcl_Interp *interp,
              int argc, char *argv[]) {
    int result;
    int arg0;
    if (argc != 2) {
```

```
        interp->result = "wrong # args";
        return TCL_ERROR;
    }
    arg0 = atoi(argv[1]);
    result = fact(arg0);
    sprintf(interp->result, "%d", result);
    return TCL_OK;
}
```

Now we're going to cite somebody. Watch for the cite tag. Here it comes [?, ?]. The tilde character (~) in the source means a non-breaking space. This way, your reference will always be attached to the word that preceded it, instead of going to the next line.

4 Supplementary Methods

4.1 First SubSection

Here's a typical figure reference. The figure is centered at the top of the column. It's scaled. It's explicitly placed. You'll have to tweak the numbers to get what you want.

This text came after the figure, so we'll casually refer to Figure 1 as we go on our merry way.

4.2 New Subsection

It can get tricky typesetting Tcl and C code in LaTeX because they share a lot of mystical feelings about certain magic characters. You will have to do a lot of escaping to typeset curly braces and percent signs, for example, like this: "The %module directive sets the name of the initialization function. This is optional, but is recommended if building a Tcl 7.5 module. Everything inside the %{, %} block is copied directly into the output. allowing the inclusion of header files and additional C code."

Figure 1: Wonderful Flowchart

Sometimes you want to really call attention to a piece of text. You can center it in the column like this:

`_1008e614.Vector_p`

and people will really notice it.

The noindent at the start of this paragraph makes it clear that it's a continuation of the preceding text, not a new para in its own right.

Now this is an ingenious way to get a forced space. Real * and double * are equivalent.

Now here is another way to call attention to a line of code, but instead of centering it, we noindent and bold it.

`size_t : fread ptr size nobj stream`

And here we have made an indented para like a definition tag (dt) in HTML. You don't need a surrounding list macro pair.

fread reads from stream into the array ptr at most nobj objects of size size. fread returns the number of objects read.

This concludes the definitions tag.

4.3 How to Build Your Paper

You have to run latex once to prepare your references for munging. Then run bibtex to build your bibliography metadata. Then run latex twice to ensure all references have been resolved. If your source file is called `usenixTemplate.tex` and your bibtex file is called `usenixTemplate.bib`, here's what you do:

```
latex usenixTemplate
bibtex usenixTemplate
latex usenixTemplate
latex usenixTemplate
```

4.4 Last SubSection

Well, it's getting boring isn't it. This is the last subsection before we wrap it up.

5 Results

6 Supplementary Results

A polite author always includes acknowledgments. Thank everyone, especially those who funded the work.

7 Discussion

It's great when this section says that MyWonderfulApp is free software, available via anonymous FTP from

`ftp.site.dom/pub/myname/Wonderful`

Also, it's even greater when you can write that information is also available on the Wonderful homepage at

`http://www.site.dom/~myname/SWIG`

Now we get serious and fill in those references. Remember you will have to run latex twice on the document in order to resolve those cite tags you met earlier. This is where they get resolved. We've preserved some real ones in addition to the template-speak. After the bibliography you are DONE.

8 References Cited

9 Author Contributions