

ElegantNote: An Elegant L^AT_EX Template for Notes

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ElegantL^AT_EX Program

Version: 2.40

Update: October 30, 2022



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1 ElegantNote Instructions

The brand new ElegantNote is redesigned on the basis of \LaTeX article, a more elegant note template! You can use either pdf\LaTeX or Xe\LaTeX to compile¹. It is recommended that pdf\LaTeX be used for notes in English while Xe\LaTeX be used for notes in Chinese.

The new template has the following features:

- two modes: good for eye mode (geye) and hazy mode;
- different devices: Pad (default), Screen(beamer size), Kindle, PC (double-page) and normal (A4);
- 5 color themes: blue (default), green, cyan, sakura and black;
- languages support: Chinese (default), English;
- support pdf\LaTeX and Xe\LaTeX ;
- prettier captions, list environments, and unified fonts;
- customized global font size: 8pt, 9pt, 10pt, 11pt, 12pt, 14pt, 17pt and 20pt;
- support for math font options for `newtx` and `mtpro2`;
- with the option of `bibstyle` (default: `apalike`) for changing style of bibliography;
- change the citation style with `cite` option: `authoryear`, `numbers` and `super`.

¹The test environment is Win10 + \TeX Live 2019.

1.1 Optional Modes

This template provides optional modes: good for eye mode (geye) and hazy mode, while the paper color is green for the former and light blue for the latter. you can use the following code to activate the desired mode:

```
\documentclass[geye]{elegantnote} % or
\documentclass[mode=geye]{elegantnote}
\documentclass[hazy]{elegantnote} % or
\documentclass[mode=hazy]{elegantnote}
```

Remark If you are expected to customize background, use:

```
\definecolor{geyecolor}{RGB}{199,237,204}
\pagecolor{geyecolor}
```

1.2 Device Options

To make the notes more comfortable to read, we designed four output options (of different sizes) that correspond to different reading devices: Pad (default), Kindle, PC and A4paper.

New: For the convenience of notes presentation, version 2.20 offers a new option for device, i.e. `device=screen`, which is similar to the size of MS Powerpoint with ratio aspect of 4:3 (2019/12/06).

The options of output for different devices are

```
\documentclass[device=pad]{elegantnote} % ipad screen size
```

```
\documentclass[device=kindle]{elegantnote} % kindle screen size
\documentclass[device=pc]{elegantnote} % double pages for pc
\documentclass[device=normal]{elegantnote} % a4 normal page
\documentclass[device=screen]{elegantnote} % 4:3 PPT size
```

Note You can also select the device by using a direct assignment method, such as:

```
\documentclass[pad]{elegantnote}
\documentclass[kindle]{elegantnote}
\documentclass[pc]{elegantnote}
\documentclass[normal]{elegantnote}
\documentclass[screen]{elegantnote}
```

Note To get a normal A4paper size PDF, please select `device=normal`.

1.3 Math Fonts

This template defines a new option (`math`), with three options:

1. `math=cm` (default), use L^AT_EX default math font (recommended).
2. `math=newtx`, use `newtxmath` math font (may bring about bugs).
3. `math=mtpro2`, use `mtpro2` package to set math font.

1.4 Color Themes²

This template contains 5 color themes, **green**, **cyan**, **blue**(default), **sakura** and **black**. If you don't need color, you can choose black theme. The color theme is enabled in the same way as before:

```
\documentclass [green]{elegantnote}
\documentclass [color=green]{elegantnote}
....
\documentclass [black]{elegantnote}
\documentclass [color=black]{elegantnote}
```

1.5 Languages

This template contains two sets of language environments, changing the language environment will change the title of table/figure (figure, table), article structure words (such as the table of contents, references, etc.), and the environment Introductory words (such as Theorem, Lemma, etc.). The different language modes are enabled as follows:

```
\documentclass [cn]{elegantnote}
\documentclass [lang=cn]{elegantnote}
\documentclass [en]{elegantnote}
\documentclass [lang=en]{elegantnote}
```

²Test for chapter footnote.

Note Chinese characters are allowed in Chinese mode only. To type in Chinese characters in English mode, please include `ctex3` or `xeCJK` package.

1.6 Theorem Class Environments

This template used the `amsthm` to create theorems, there are 4 types of theorem environments

- **Theorem-Class:** theorem, lemma, proposition, corollary;
- **Definition-Class:** definition, conjecture, example;
- **Remark-Class:** remark, note, case;
- **Proof-Class:** proof.

Remark With the option `lang=cn`, the introductory words of the theorem class environments will be changed to Chinese.

2 Writing Sample

We will define the integral of a measurable function in three steps. First, we define the integral of a nonnegative simple function. Let E be the measurable set in \mathcal{R}^N .

Definition 2.1 (Left Coset) *Let H be a subgroup of a group G . A left coset of H in G is a subset of G that is*

³Please use `scheme=plain` to retain headlines in English.

of the form xH , where $x \in G$ and $xH = \{xh : h \in H\}$. Similarly a right coset of H in G is a subset of G that is of the form Hx , where $Hx = \{hx : h \in H\}$

Note that a subgroup H of a group G is itself a left coset of H in G .

Lemma 2.1 (Size Of Left Coset) *Let H be a finite subgroup of a group G . Then each left coset of H in G has the same number of elements as H .*

Theorem 2.2 (Lagrange's Theorem) *Let G be a finite group, and let H be a subgroup of G . Then the order of H divides the order of G .*

Proof. Let z be some element of $xH \cap yH$. Then $z = xa$ for some $a \in H$, and $z = yb$ for some $b \in H$. If h is any element of H then $ah \in H$ and $a^{-1}h \in H$, since H is a subgroup of G . But $zh = x(ah)$ and $xh = z(a^{-1}h)$ for all $h \in H$. Therefore $zH \subset xH$ and $xH \subset zH$, and thus $xH = zH$. Similarly $yH = zH$, and thus $xH = yH$, as required.

Regression analysis is a powerful statistical method that allows you to examine the relationship between two or more variables of interest. While there are many types of regression analysis, at their core they all examine the influence of one or more independent variables on a dependent variable. The process of performing a regression allows you to confidently determine which factors matter most, which factors can be ignored, and how these factors influence each other.

Let's continue using our application training example. In this case, we'd want to measure the historical

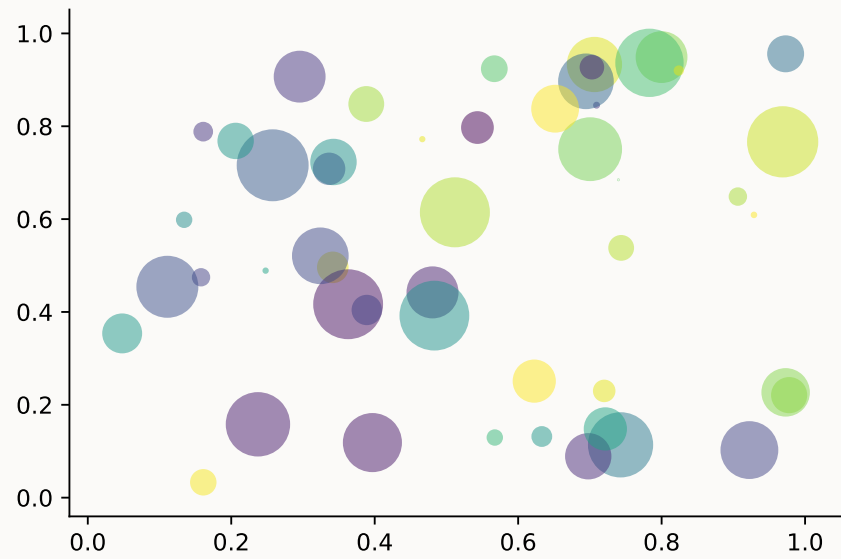


Figure 1: Matplotlib: Scatter Plot Example

levels of satisfaction with the events from the past three years or so, as well as any information possible in regards to the independent variables.

Table 1: Auto MPG and Price

	(1)	(2)
mpg	-238.90*** (53.08)	-49.51 (86.16)
weight		1.75*** (0.641)
constant	11,253*** (1,171)	1,946 (3,597)
obs	74	74
R^2	0.220	0.293

Standard errors in parentheses

*** p_i0.01, ** p_i0.05, * p_i0.1

- Routing and resource discovery;
 - Language Models
 - Vector Space Models
- Resilient and scalable computer networks;
- Distributed storage and search.

3 Acknowledgement

Thank [sikouhju](#) and [syvshc](#) for their quick response to Github issues and continuously support work for ElegantLaTeX. Thank ChinaTeX and [LaTeX Studio](#) for their promotion.

4 FAQ

1). *How to remove the information of version?*

Please comment `\version{x.xx}`.

2). *How to remove the information of date?*

Please type in `\date{}`.

3). *How to add several authors?*

Use `\and` in `\author` and use `\\` to start a new line.

```
\author{author 1\\ org. 1 \and author 2 \\ org. 2 }
```