Sample LaTeX File

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October 25, 2024

Abstract

This document represents the output from the file "example_latex.tex" once compiled using your favorite LaTeXcompiler. This file should serve as a good example of the basic structure of a ".tex" file as well as many of the most basic commands needed for typesetting documents involving mathematical symbols and expressions.

Contents

1 Introduction

This document serves as an introduction to using LaTeX for typesetting documents. Examples of commonly used commands and features are listed below to help you get started.

2 Some examples to get started

2.1 How to create Sections and Subsections

Use the section and subsection commands to organize your document. LaTeX automatically handles the formatting and numbering according to the document class you've chosen.

2.2 How to include Figures

To include an image, use the `includegraphics` command within a figure environment. Add a caption using the `caption` command. See the code for Figure 1 for an example.

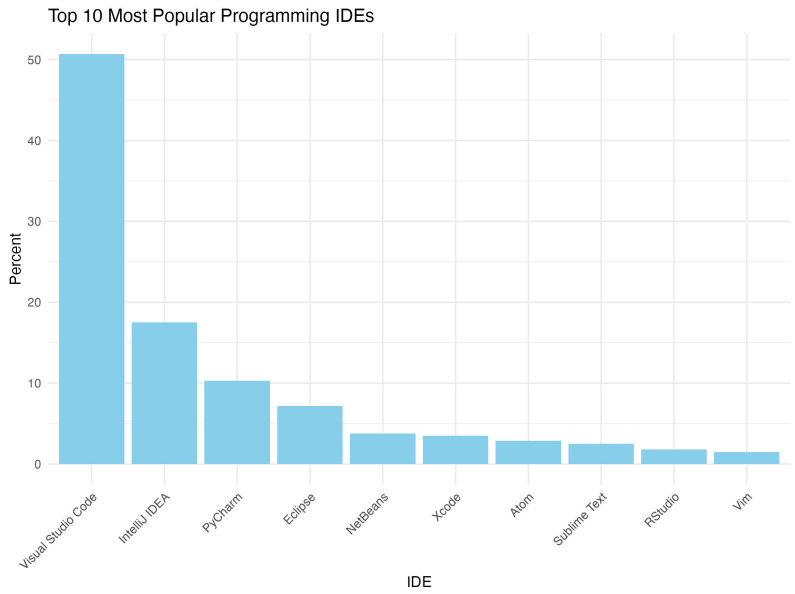

Figure 1: This is an example figure.

Here is a simple example of a diagram created using TikZ:

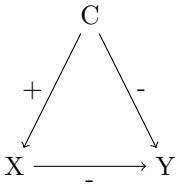

Figure 2: A simple causal diagram.

2.3 How to add Tables

Use the table and tabular environments for creating tables. See Table 1 for an example.

Item	Quantity
Widgets	42
Gadgets	13

Table 1: An example table.

2.4 How to add Lists

Create lists with automatic numbering:

1. First item,
2. Second item.

. . . or bullet points:

- First bullet,
- Second bullet.

2.5 How to write Mathematics

LaTeX excels at typesetting mathematics. Let $X_1, X_2, \ldots, X_n$ be a sequence of independent and identically distributed random variables with $\mathrm{E}[X_i] = \mu$ and $\mathrm{Var}[X_i] = \sigma^2 < \infty$, and let

$$S_n = \frac{X_1 + X_2 + \cdots + X_n}{n} = \frac{1}{n}\sum_{i=1}^{n} X_i$$

denote their mean. Then as n approaches infinity, the random variables $\sqrt{n}(S_n - \mu)$ converge in distribution to a normal $\mathcal{N}(0, \sigma^2)$.

2.6 How to add Citations and a References List

Upload a `.bib` file containing your BibTeX entries. Cite entries using the `\cite` command, like this: Greenwade (1993). Specify a bibliography style and the filename of the `.bib` file.

References

George D. Greenwade. The Comprehensive Tex Archive Network (CTAN). *TUGBoat*, 14(3):342–351, 1993.