Akademik yazım açısından elimizde ne gibi araçlar var

Word'den başkası yalan (mı?)

Dr. Ozan Evkaya

School of Mathematics, Edinburgh University

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Outline

Icerik

- Latex ile akademik yazıma dair. Overleaf ne işe yarar ?
- Word vs Overleaf farkına dair
- Akademik yazım/raporlama için elimizde başka neler var ?
- R ortamında akademik yazım: Rmarkdown temel özellikleri
- Rmarkdown ve ötesine dair

Intro

Basic principles

How LaTeX works:

- Necessary files
- The flow and organisation of files
- How does this compare to conventional word processors (e.g. MS-Word)
  - Forget What You See Is What You Get (WYSIWYG)
  - Think like a programmer
  - File structure and flow

```
\documentclass{***}
\begin{document}
...
\end{document}
```

Introduction

Change the way we think/work

- Forget *What You See Is What You Get (WYSIWYG)*
- Think like a programmer
- File structure and flow

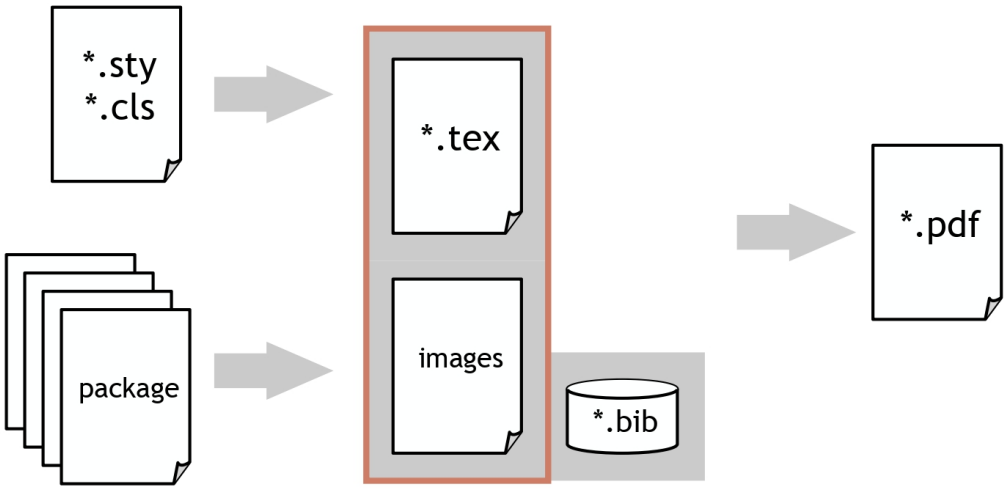
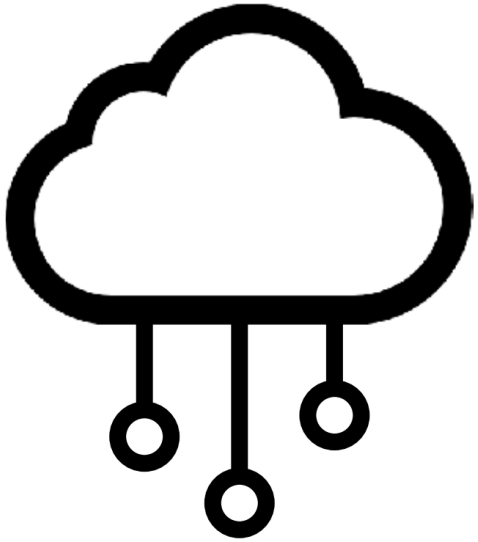


Figure 1:

Latex vs Overleaf

- Compilation is quicker
- No need for internet connection
- Sharing/team work not easy
- Version tracking difficult



- Sharing and team work
- Track changes
- Version tracking
- Slower compilation (e.g. large files)
- Needs internet (!)

Figure 2:

Bir Çalışma

Details

- Participants were allowed to use all tools, editors, plug-ins, and add-ons that they were accustomed to using with their respective software. For example, many LaTeX users produce documents with external text editors such as TeXnicCenter, LaTeX Editor, Kile, or WinEdit because LaTeX does not offer an internal text editor.
- The three text types were presented in a random order to each participant. The participants were instructed to reproduce the source text within thirty minutes. Each participant was given five minutes to familiarize themselves with the text.
- The performance of each participant was measured for each text sample by three variables: (1) the number of orthographic and grammatical mistakes; (2) the number of formatting errors and typos; and (3) the amount of written text (in symbols and words) produced within 30 minutes

Findings

Table 2. Mean absolute frequencies of orthographic and grammatical mistakes, formatting errors and typos, and the amount of written text (i.e., number of words) across all four groups for the continuous text (a), the table text (b), and the equation text (c).

a. Continuous text

	Word						LaTeX					
	Novices		Experts		Overall		Novices		Experts		Overall	
	M	*SD*	*M*	*SD*	*M*	*SD*	*M*	*SD*	*M*	*SD*	*M*	*SD*
Orthographic and grammatical mistakes	5.9	3.5	7.9	6.7	6.9	5.3	7.0	6.6	11.3	9.5	9.2	8.2
Formatting errors and typos	10.0	3.9	9.3	4.1	9.7	3.9	17.3	4.1	16.1	4.0	17.1	4.0
Amount of written text	331	49.1	379	11, 7	355	42.4	250	104	308	99.4	279	103.3

b. Table text

	Word						LaTeX					
	Novices		Experts		Overall		Novices		Experts		Overall	
	M	*SD*	*M*	*SD*	*M*	*SD*	*M*	*SD*	*M*	*SD*	*M*	*SD*
Orthographic and grammatical mistakes	9.9	7.8	7.1	4.4	8.5	6.4	9.7	10.5	7.8	4.5	8.8	7.9
Formatting errors and typos	12.0	3.7	11.3	4.1	11.4	3.9	19.5	3.6	18.7	3.0	19.1	3.3
Amount of written text	353	82.9	395	78.7	374	81.6	191	118	260	137.8	226	130

c. Equation text

	Word						LaTeX					
	Novices		Experts		Overall		Novices		Experts		Overall	
	M	*SD*	*M*	*SD*	*M*	*SD*	*M*	*SD*	*M*	*SD*	*M*	*SD*
Orthographic and grammatical mistakes	5.2	4.1	3.9	3.5	4.6	3.8	11.4	8.2	9.3	7.9	10.4	7.9
Formatting errors and typos	24.4	6.4	19.3	11.8	21.9	9.6	14.9	5.5	12.5	4.9	13.7	5.2
Amount of written text	231	57.4	270	67.3	250	64.1	314	16.7	312	24.6	313	20.5

Note—Orthographic and grammatical mistakes were counted as one mistake per word, even if a participant made more than one mistakes in a word. Each formatting error and each typo was counted as one mistake. For instance, if a text contains three different font sizes each wrong formatted text section was counted as one mistake.

Figure 3:

Citation: Knauff M, Nejasmic J (2014) An Efficiency Comparison of Document Preparation Systems Used in Academic Research and

Small Comparison

Word

Microsoft Word requires little start-up time and provides easy and instantaneous control of textual input and output. Microsoft Word is the predominant document preparation system across many disciplines, including medicine, law, business, and the life sciences, and is also the dominant document preparation system for professional communications.

LaTeX

LaTeX, in contrast, is a programming language that requires the use of an external editing interface to produce documents. LaTeX is frequently used in mathematics, physics, computer science, and engineering because it provides the user unlimited flexibility and is particularly useful if the user needs to set complex mathematic equations in a professional layout.

LaTeX is freely available as open-source software. In contrast, Microsoft Word is a commercial product licensed by the Microsoft Corporation

Typical Output

A typical document

Document statistics

```
!!! Could not identify document class !!!
File: LaTeX_Workshop.tex
Encoding: ascii
Sum count: 17
Words in text: 2
Words in headers: 15
Words outside text (captions, etc.): 5
Number of headers: 3
Number of floats/tables/figures: 0
Number of math inlines: 0
Number of math displayed: 0
Subcounts:
  text+headers+captions (#headers/#floats/#inlines/#displayed)
  0+0+0 (0/0/0/0) _top_
  0+4+0 (1/0/0/0) Chapter: This is the introduction
  0+2+0 (1/0/0/0) Chapter: Literature review
  2+1+0 (1/0/0/0) Chapter: Theory
  0+1+0 (1/0/0/0) Chapter: Notation
  0+1+0 (2/0/0/0) Chapter: This is the first appendix

Included file: ./Chapters/Front_Matter.tex
Encoding: ascii
Sum count: 24
Words in text: 21
Words in headers: 3
Words outside text (captions, etc.): 5
Number of headers: 2
Number of floats/tables/figures: 0
Number of math inlines: 0
Number of math displayed: 0
Subcounts:
  text+headers+captions (#headers/#floats/#inlines/#displayed)
  15+2+0 (1/0/0/0) Section: Personal Statement
  5+1+0 (1/0/0/0) Section: Acknowledgements

Included file: ./Chapters/Introduction.tex
Encoding: ascii
Sum count: 77
Words in text: 57
Words in headers: 5
Words outside text (captions, etc.): 15
Number of headers: 2
Number of floats/tables/figures: 2
Number of math inlines: 0
Number of math displayed: 0
Subcounts:
```


Figure 4:

Overleaf

Introduction

Overleaf basics

1. Go to www.overleaf.com
2. Login / register with your university e-mail address
3. Create a new (blank) project
4. Start writing your documents

… let's get started!

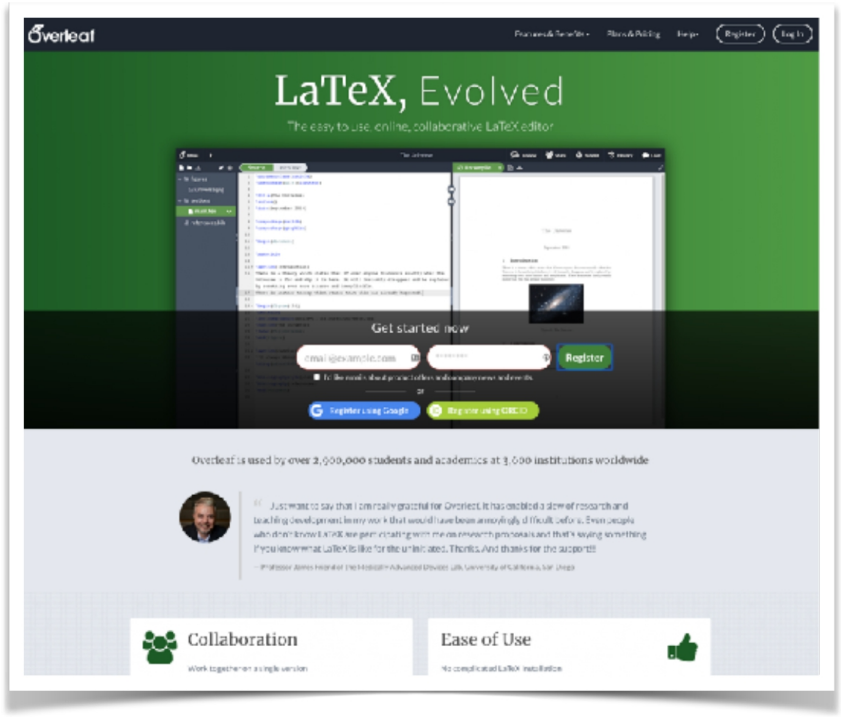


Figure 5:

Font features

- Regular
- *Italic*
- SmallCaps
- **Bold**
- ***Bold Italic***
- **Bold SmallCaps**
- `Monospace`
- *`Monospace Italic`*
- **`Monospace Bold`**
- ***`Monospace Bold Italic`***

Lists

Items

- Milk
- Eggs
- Potatos

Enumerations

1. First,
2. Second and
3. Last.

Descriptions

PowerPoint Meeh.

Beamer Yeeeha.

Tables

Table 1: Largest cities in the world (source: Wikipedia)

City	Population
Mexico City	20,116,842
Shanghai	19,210,000
Peking	15,796,450
Istanbul	14,160,467

Blocks

Three different block environments are pre-defined and may be styled with an optional background color.

Default
Block content.

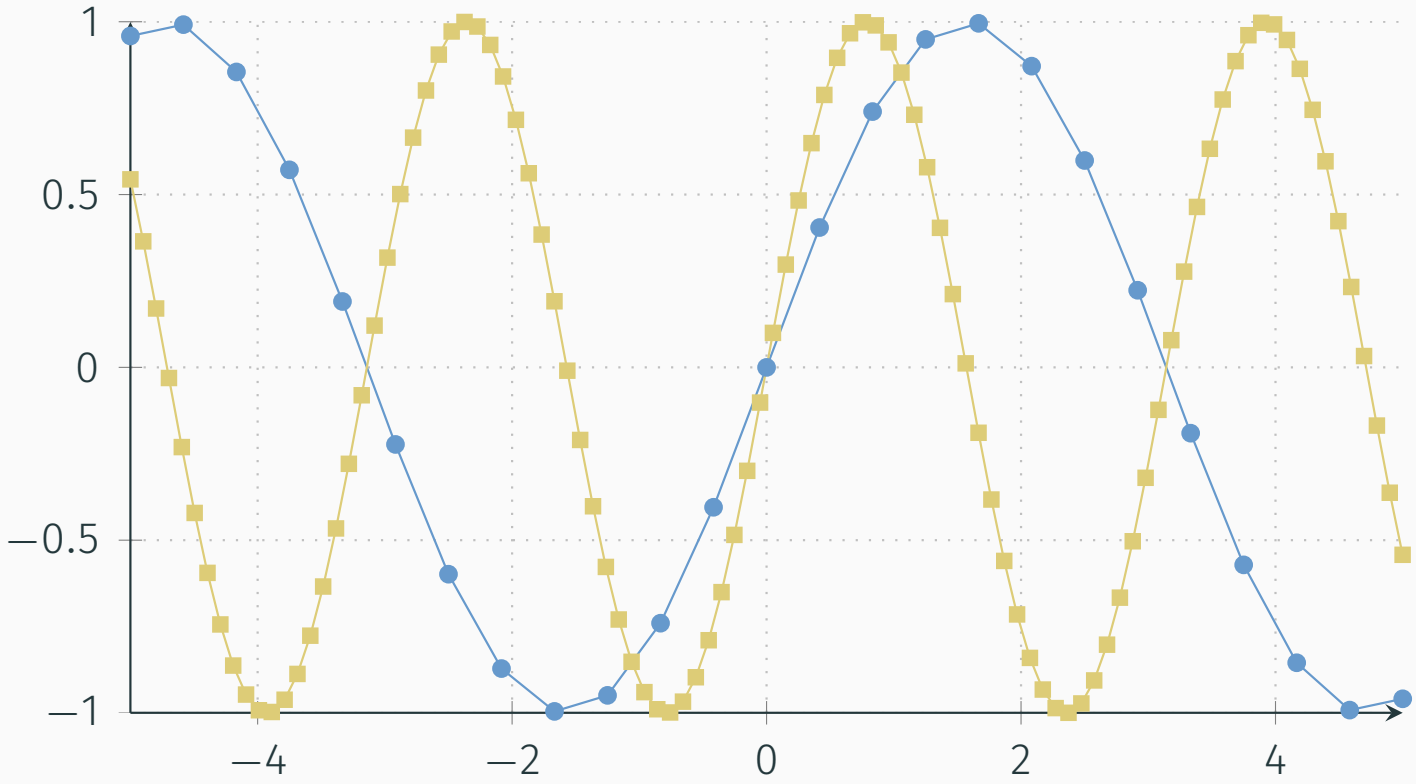
Alert
Block content.

Example
Block content.

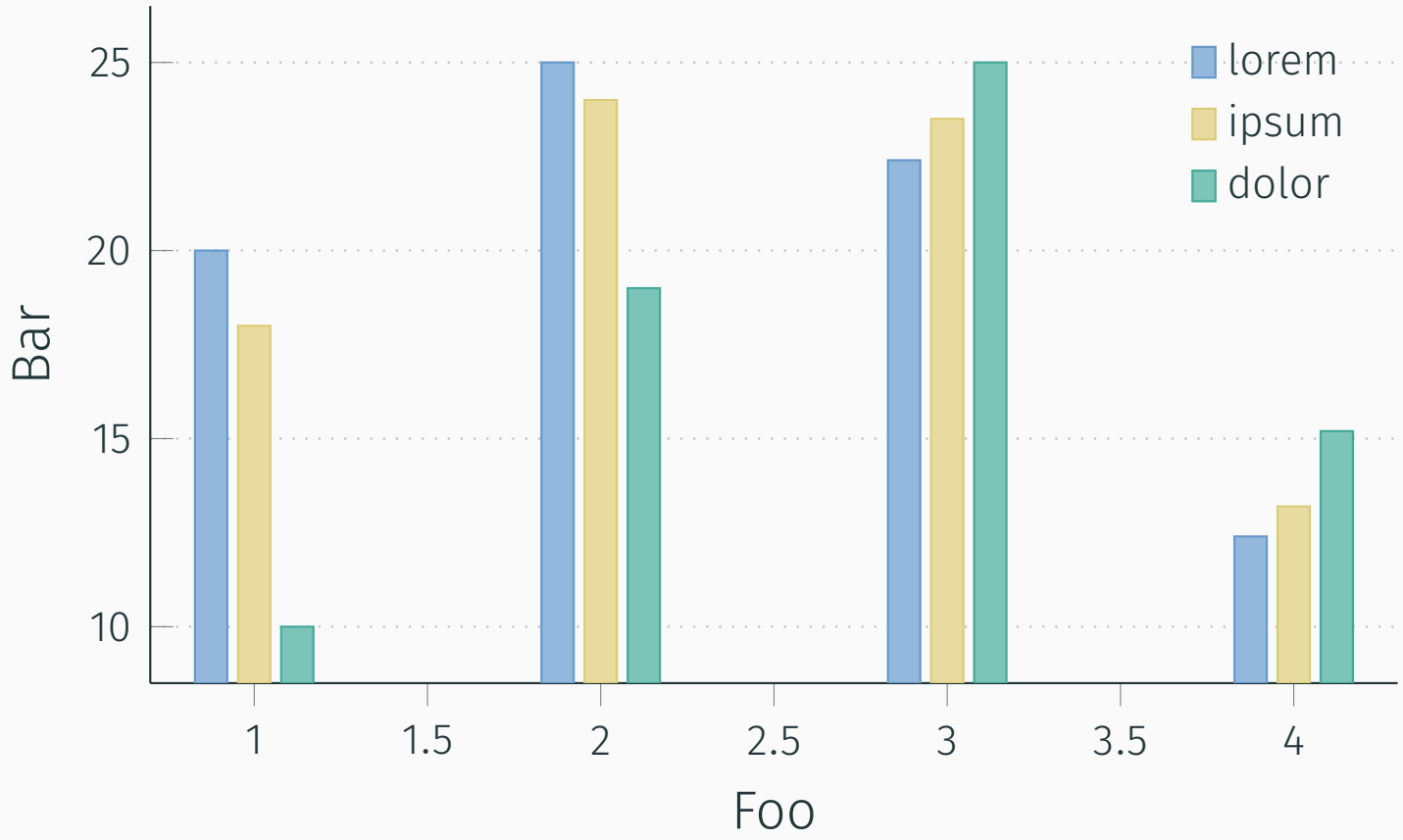
Math

$$e = \lim_{n \to \infty} \left(1 + \frac{1}{n}\right)^n$$

Line plots



Bar charts



Yardımcı Araçlar

Good Friends

1. mathpix
2. tablegenerator

R markdown

Overview

R Markdown is a format for writing reproducible, dynamic reports with R. Use it to embed R code and results into slideshows, pdfs, html documents, Word files and more. To make a report:

1. YAML-header
2. body:
    2.1 text
    2.2 code chunks

Text

1. Markup using (expanded) markdown-syntax (cheat sheet)
2. Sections/subsections/... are created using #/##/...
3. Math can be added using latex-code when put between dollar-signs
4. If the output is a pdf, other latex-code can be included (will be ignored if other output-format)

Code Chunk

1. Contain R (python/sql/...)-code and print output
2. echo: print code itself as well
3. eval: do/don't actually evaluate code
4. include: evaluate code, but do/don't include the output
5. cache: 'save/remember' the output so it doesn't have to be recalculated on a next run, except when the code of the chunk has changed. Be aware, if the input of the chunk changes, but not the chunk itself, the chunk will not be re-evaluated and the output is not updated
6. Inline code possible as well, e.g. 'r nrow(df)'

Outputs

1. Documents:
    1.1 word: Implementation is far from ideal. It works, but changing layout is a hassle and many things cannot be performed within rmarkdown. Only solution: change after conversion
    1.2 html: If you know html, almost everything is possible. You can use several themes or add plain html.
    1.3 pdf: Rendering rmarkdown to pdf, uses latex. You need an installation of Miktex, TexLive or TinyTex
2. Presentations:
    2.1 ppt
    2.2 beamer (pdf)
    2.3 ioslides (html)

Use of Parameters

1. R Markdown documents can include one or more parameters whose values can be set when you render the report
2. Parameters are made available within the knit environment as a read-only list named params. To access a parameter in code, call params$
3. Add a params argument to render to create a report that uses a new set of parameter values For instance, render("filename.Rmd", params = list(data = "value"))
4. Better yet, click the "Knit with Parameters" option in the dropdown menu next to the RStudio IDE knit button to set parameters, render, and preview the report in a single user friendly step

Bibliography

1. Store bibliography in any of the approved formats (.bib, .xml, .json, etc)
2. include in yaml: bibliography: biblio.bib
3. cite in text using [@ref]
4. you can add the citr-addin in RStudio to simplify the matter. For this you need to use citr package

For more details: **??**

https://pandoc.org/MANUAL.html#citations

Kapatırken

Keep in touch

https://www.linkedin.com/in/ozanevkaya/
https://github.com/oevkaya
https://medium.com/@ozanevkaya
https://www.researchgate.net/profile/Ozan-Evkaya
https://www.instagram.com/ozanevkaya/

Questions?

Sources to look at

- *https://medium.com/sigma-xi-vit/latex-overhyped-or-still-a-gem-8c4fc4150b22*
- *https://www.overleaf.com/learn/how-to/How_to_link_your_Overleaf_account_to_Mendeley_and_Zotero?&nocdn=true#References_containing_TeX.2FLaTeX_code*
- *https://www.scijournal.org/articles/best-academic-writing-tools*
- *https://tr.overleaf.com/blog/top-tips-for-teaching-with-overleaf*

Sources to look

- *https://www.overleaf.com/learn/latex/Free_online_introduction_to_LaTeX_(part_1)*
- *https://www.overleaf.com/learn/latex/Knitr*
- *http://edrub.in/ARE212/latexKnitr.html*
- *https://www.overleaf.com/latex/examples/sample-rtex-document/phftyfcvjywp*