Technical Communication for Computer Scientists
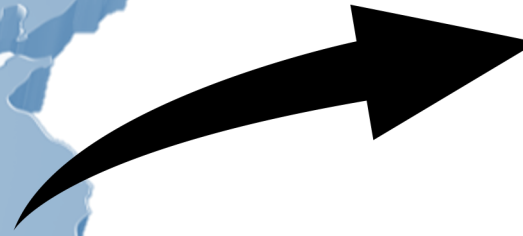
Yu Yang

Oct. 16, 2020

Learning Objectives for Today
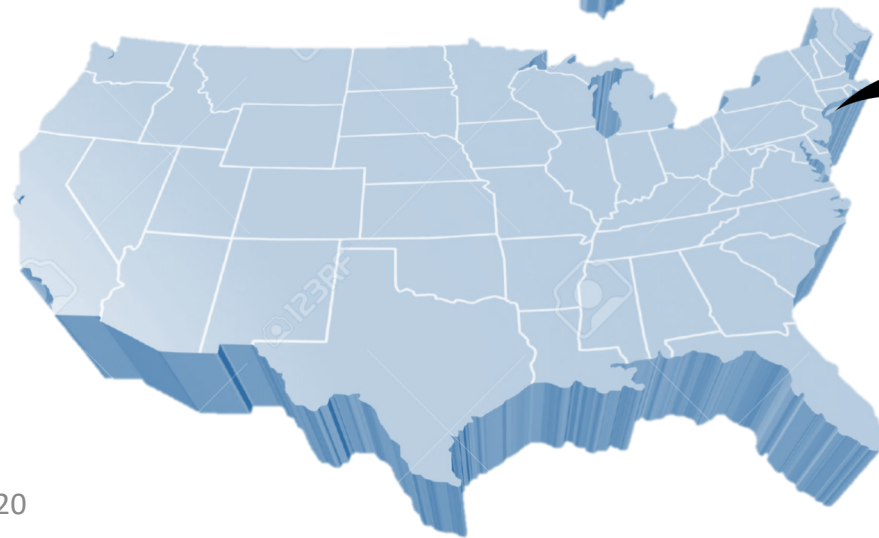
- Introductions
- Motivation
- Class Overview
- Email

- Latex
- Grammar & Spell Check

My Story

- Anhui
  - High School

- Liaoning, NEU
  - 2011 - 2015

- Rutgers, NJ
  - Now, PhD Candidate
  - Research Assistant
  - Smart City

Is Technical Communication Important?

Technology is the application of knowledge to commerce and industry.

- To be successful in industry, you must be able to sell yourself, your products, or your ideas. To sell, you must communicate!

- Lack of communication negates other skills. If you cannot tell someone what you have done, then it does not matter if you did it!

- In your career, you will be judged by your reports (oral or written) more than anything.

Technical Communication:
- a professional career path

School
- Email
- Lab Reports
- Homework
- Thesis
- Publications
- Conference; Oral Presentations

Technical Career
- Progress reports
- Planning schedules & deliverables
- Writing proposals
- Meetings
- Leadership

Job search
- Resume
- Cover Letter
- Interview
- Follow-up

Executive Career – the "big picture"
- Mentoring
- Ingesting information
- Deliver information
- Strategy planning
- Conferences – invited presentations

Learning Objectives for This Course

Writing

- Email
- Writing Proposal
- Project Management & Scheduling
- Technical Writing

Presentation

- Design your slides
- Sell you idea

Networking

- Networking Skills
- Interpersonal Communication

Research

- Research Environment
- Research Pipeline
- Research Ethics

Course Information

- Homepage
  - https://www.yyang.site/neu2020/
- WeChat

- Online course: Zoom
  - Meeting ID: 604 367 6479
  - Password: the date (e.g., 20201016)

Grading

- Homework (40%)
- Proposal Presentation (20%)
- Final Presentation (30%)
- Class Participation (10%)

My Expectation

- Reduce stress about grades so you can focus on the communication process
- Effort and class participation
- No late homework submission
  - Late for up to 1 hour: 10% penalty
  - Late for up to 12 hour: 30% penalty
  - Late for up to 24 hour: 50% penalty
  - Late for over 24 hour: 100% penalty

Learning Objectives for Today

- Introductions
- Motivation
- Class Overview
- **Email**
- Latex
- Grammar & Spell Check

E-Mail Address

- QQ (16/25)
- NetEase, 163, 126 (5/25)
- Gmail (3/25)
- Yahoo (1/25)

- Outlook

huanghanbo417@163.com

123456@qq.com

XXX@sc.neu.edu

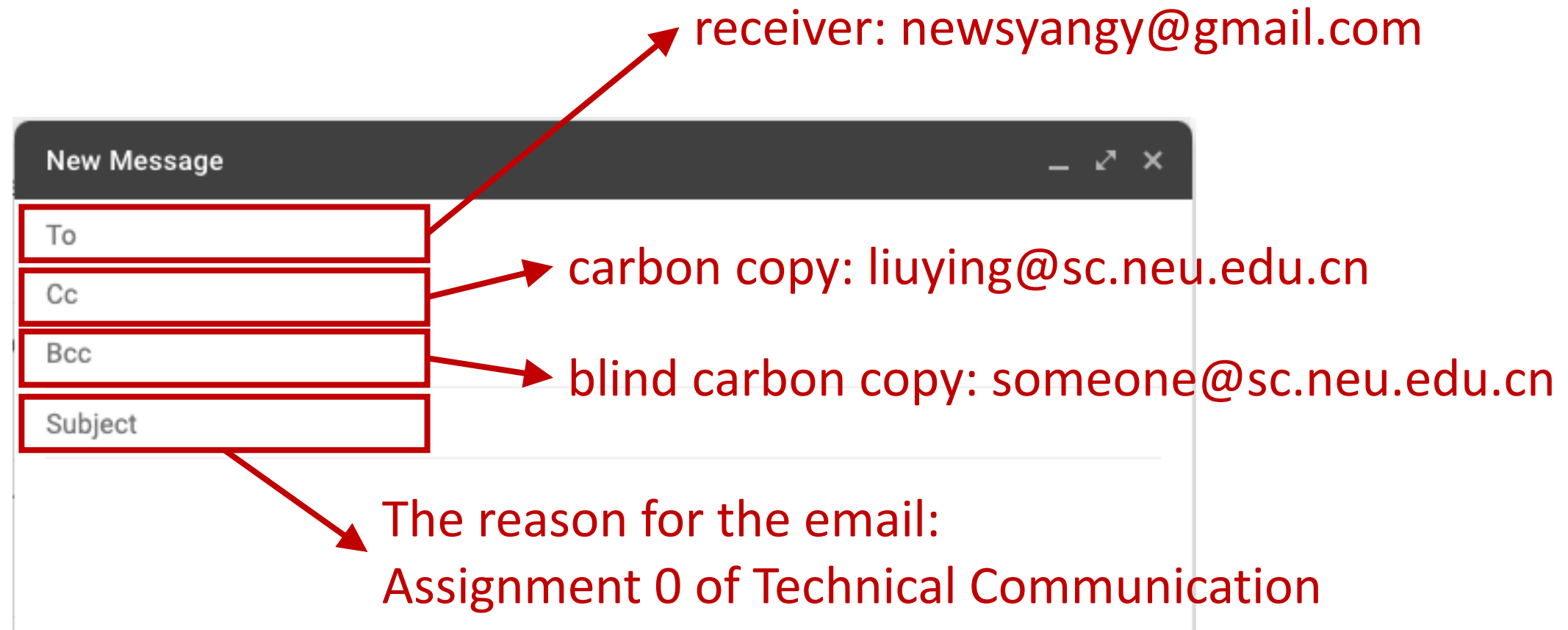☆ Jason Chu

☆ Emmanuel Bayetemisi

☆ 李唯照 软件1912

☆ Li YuXiang

☆ wants

☆ 黄瀚博   Se

☆ 小王子

E-Mail Structure

receiver: newsyangy@gmail.com

New Message

To

Cc — carbon copy: liuying@sc.neu.edu.cn

Bcc — blind carbon copy: someone@sc.neu.edu.cn

Subject

The reason for the email:
Assignment 0 of Technical Communication

E-Mail Structure (cont.)

Hi/Dear Mrs./Ms./Mr./Dr./Professor NAME,

→ **Who you are talking with?**
- **Greeting/Salutation**
- **Title, Name**

I am a student for the course Technical Communication for Computer Scientists. Please kindly find the following information for assignment 0.

- Name: Yu Yang
- Student ID: 20201016
- Email Address: newsyangy@gmail.com
- My expectation for the class: improve my presentation skills
- Personal Interests: Photography, Basketball
- Photo: Please see the attached file

→
- **Who you are?**
- **What is your message?**
- **Clear & Concise**
- **Easy to read**

Best regards/Sincerely/All the best,

→ **Polite sign-off**

Yu Yang
Student of English Class
Software College, Northeastern University
newsyangy@gmail.com

→ **Signature**

How to fail an email (1)

- Meaningless Subject
  - Nice to meet U!
  - Important! Read Immediately!!
  - Quick question.
  - Etc.

- Most students did great!
  - Assignment 0
  - Self introduction

Gas leak in the area of Fifth Avenue
Will we need a larger room for Friday?

How to fail an email (2)

- Who are you?
  - I am XXX from Software Engineering English Class 1901
  - Signature

- If others are not familiar with you, do introduce yourself.

- Some did good but many failed this part

How to fail an email (3)

- Be careful about your attachments
  - If you can present your message in the email, do not put it in an attachment
  - **Be direct.**
  - Can carry viruses
  - May be blocked by the email server
  - Others may not open it…

- Some did send attachments but without any introduction in the email

How to fail an email (4)

Proofread

- Never let typos or grammar errors destroy your impression.
- Not be serious about the conversation
- Not value my reply

How to fail an email (5)

Make it look good

- Color

- Font & Font size

- Structure

Hi Sir,

Th

Be

Yu

Hi Sir,

- Name: Yu Yang
- Student ID: 20201016
- Email Address: newsyangy@gmail.com
- My expectation for the class: improve my presentation skills
- Personal Interests: Photography, Basketball
- Photo: Please see the attached file

I am Yu Yang. My Student ID is 20201016. My Email address is newsyangy@gmail.com. My expectation for the class is to improve my presentation skills. My personal interests are photography and basketball.

Formal VS Informal Email

Format	Formal	Informal
Salutation	• Dear Professor XXX • To Whom it may concern	Hi/Hello, NAME
Body (Start)	• I hope all is well with you. • I hope this email finds you well. • Thank you for your prompt response.	Hi, how are you?
Body (Main)	• *Could you please let me know if you are available?* • *I would appreciate it if you could send me the document…* • *Please let me know if this will be possible…*	• *I was just wondering if you were around later…* • *Would you mind coming earlier?* • *Can you call me back ASAP?*
Body (End)	• Thank you for your time and I look forward to hearing back from you. • Please feel free to call or email me if you have any questions. • I would appreciate it if this could be taken care of promptly.	
Closing	• Thank you • Best regards • *Yours* sincerely	• *Thank you* • *Take care* • *Love*

Formal VS Informal Email (cont.)

Things to avoid in formal emails

- **Colloquial words:** "wanna" (want to)
- **Contractions:** Can't, Didn't, Haven't
- **Abbreviated words:** ASAP, lol, P.S, BTW
- **Imperative words or sentences:** Stop, Do this, Go ahead

Learning Objectives for Today

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- Email
- **Latex**
- Grammar & Spell Check
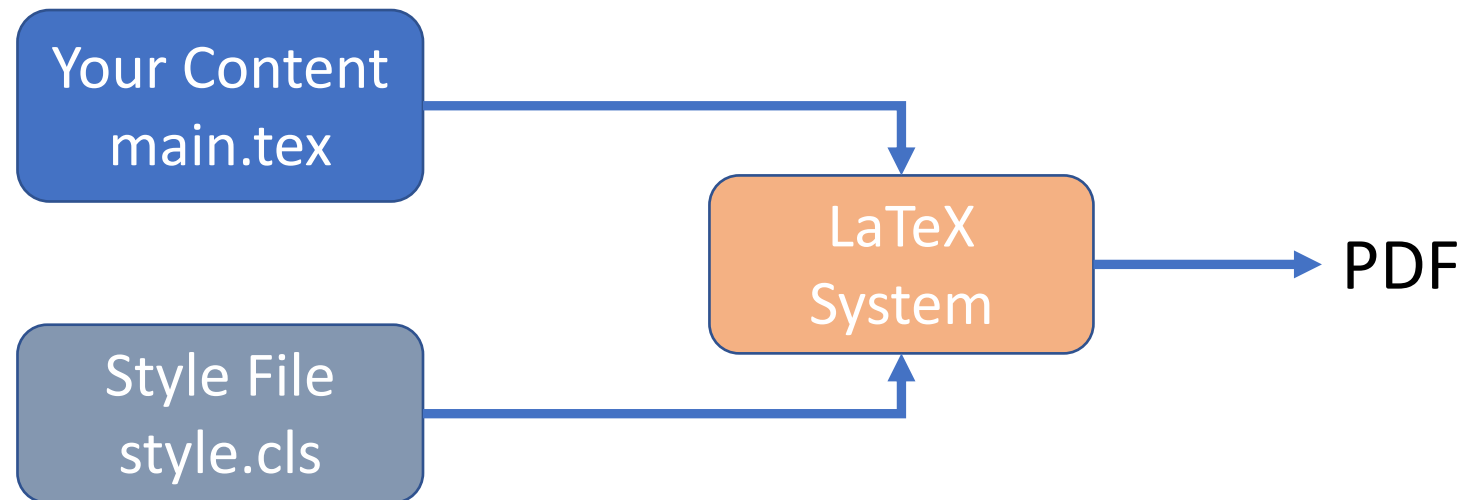
LaTeX (pronounced LAY-tek)

- A software system for document preparation

- TEX: Donald Knuth (Turing Award Winner)
- LaTeX: Leslie Lamport (Turing Award Winner)

- Similar to Markdown

- The most widely used writing tool in academia
  - Technical and scientific reports
  - Publications
  - Thesis
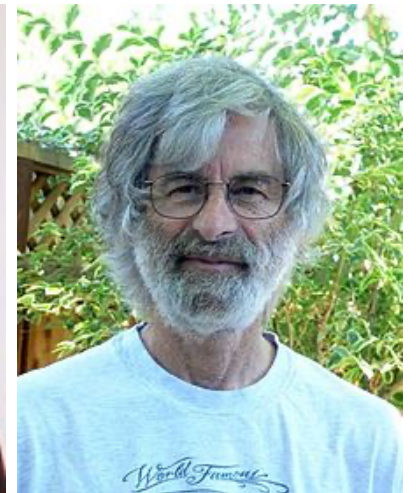
LaTeX

- Pros (Compared to MS Word)
  - **Style is consistent** (layout, fonts, tables, maths, etc.)
  - **Sperate** the content of the document from the **style**
  - Concentrate on the **content** rather than **appearance**
  - Free

LaTeX Tools – latexbase

https://latexbase.com/

Tutorial

Your Content

Your Document

LaTeX Tools - Overleaf

https://www.overleaf.com/
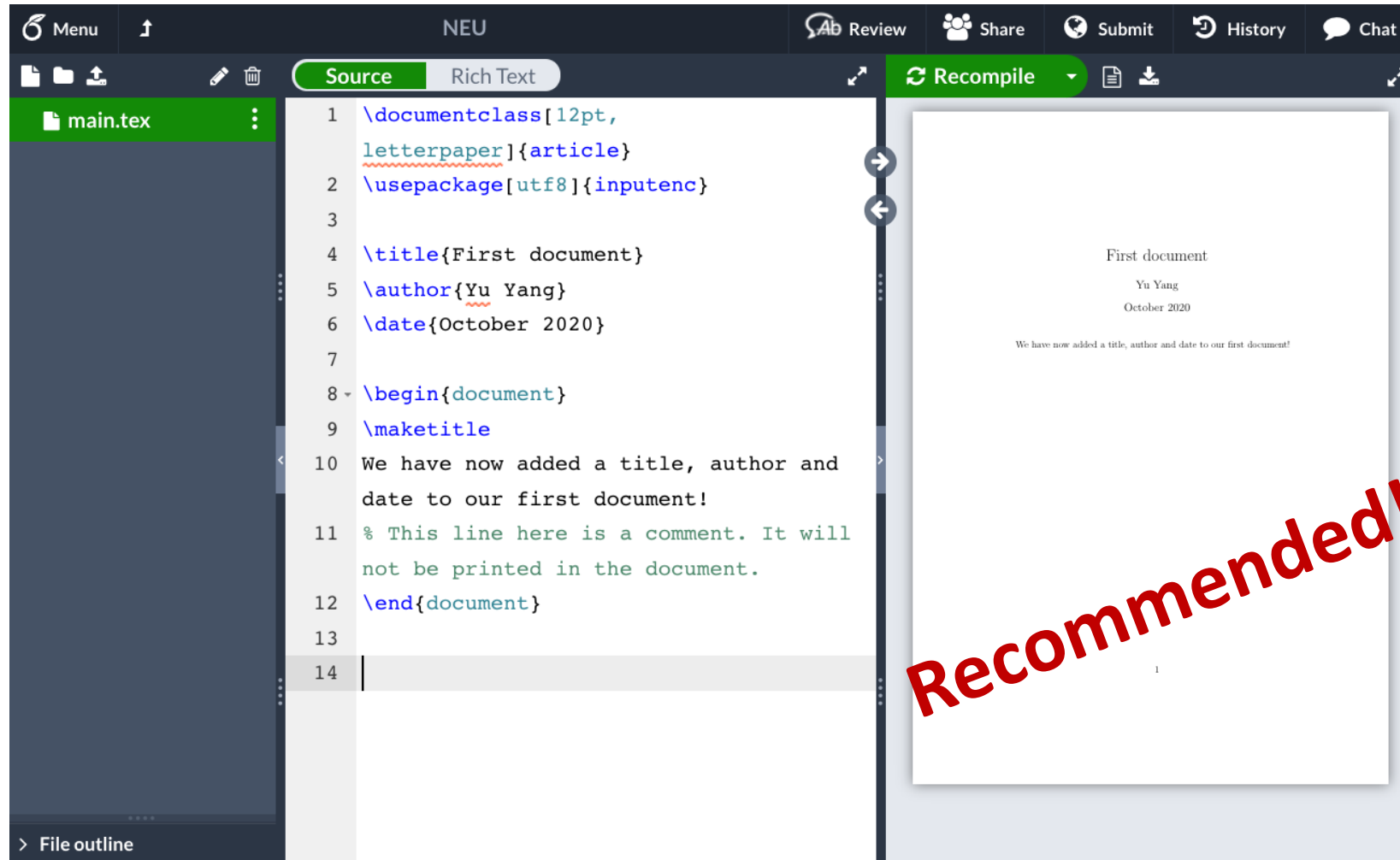
First Piece of LaTeX

main.tex

declares the type of document, e.g., report, book

```
\documentclass{article}
```

```
\begin{document}
First document. This is a simple example, with no
extra parameters or packages included.
\end{document}
```

the body of the document

your content

First document. This is a simple example, with no extra parameters or packages included.

The preamble of a document

Everything before $\color{red}\texttt{\\begin\{document\}}$ is called the preamble.
- Type of the document
- The language you write
- The package you use

font size   paper size: letterpaper, a4paper

```
\documentclass[12pt, letterpaper]{article}
\usepackage[utf8]{inputenc}
```

encoding

Add a title, author and date

- \title{First document}

- \author{First Name, Last Name}

- \date{October 2020}

```
\usepackage[utf8]{inputenc}

\title{First document}
\author{Yu Yang}
\date{October 2020}


\begin{document}
\maketitle          print title, author and date
We have now added a title, author and date to our
first document!
% This line here is a comment. It will not be printed
in the document.
\end{document}
```

comments

First document

Yu Yang

October 2020

We have now added a title, author and date to our first LATEX document!

Bold, italics and underlining

- **Bold:** \textbf{...}
- *Italics:* \textit{...}
- <u>Underline</u>: \underline{...}

```
Some of the \textbf{greatest}
discoveries in \underline{science}
were made by \textbf{\textit{accident}}.
```

Some of the **greatest** discoveries in <u>science</u> were made by ***accident***.

Creating lists: unordered

- itemize

- The individual entries are indicated with a black dot, a so-called bullet.

- The text in the entries may be of any length.

```
\begin{itemize}
  \item The individual entries are indicated
with a black dot, a so-called bullet.
  \item The text in the entries may be of any
length.
\end{itemize}
```

Creating lists: ordered

- enumerate

```
\begin{enumerate}
  \item This is the first entry in our list
  \item The list numbers increase with each
entry we add
\end{enumerate}
```

1. This is the first entry in our list

2. The list numbers increase with each entry we add

Adding images

There are apples in Figure 1.

Figure 1: Apples

- \usepackage{graphicx}

```
There are apples in Figure~\ref{fig:apple}.

\begin{figure}[h]     placement specifier
    \centering  horizontal center
    \includegraphics[width=0.5\textwidth]{apple.JPG}
    \caption{Apples} caption
    \label{fig:apple} unique ID
\end{figure}
```

h: place the float here
t: at the top of the page
b: bottom of the page

Document Structure

- Organize the document with structures

```latex
\section{Section A}

\subsection{SubSection A}

\subsubsection{SubSubSection A}
```

1   Section A
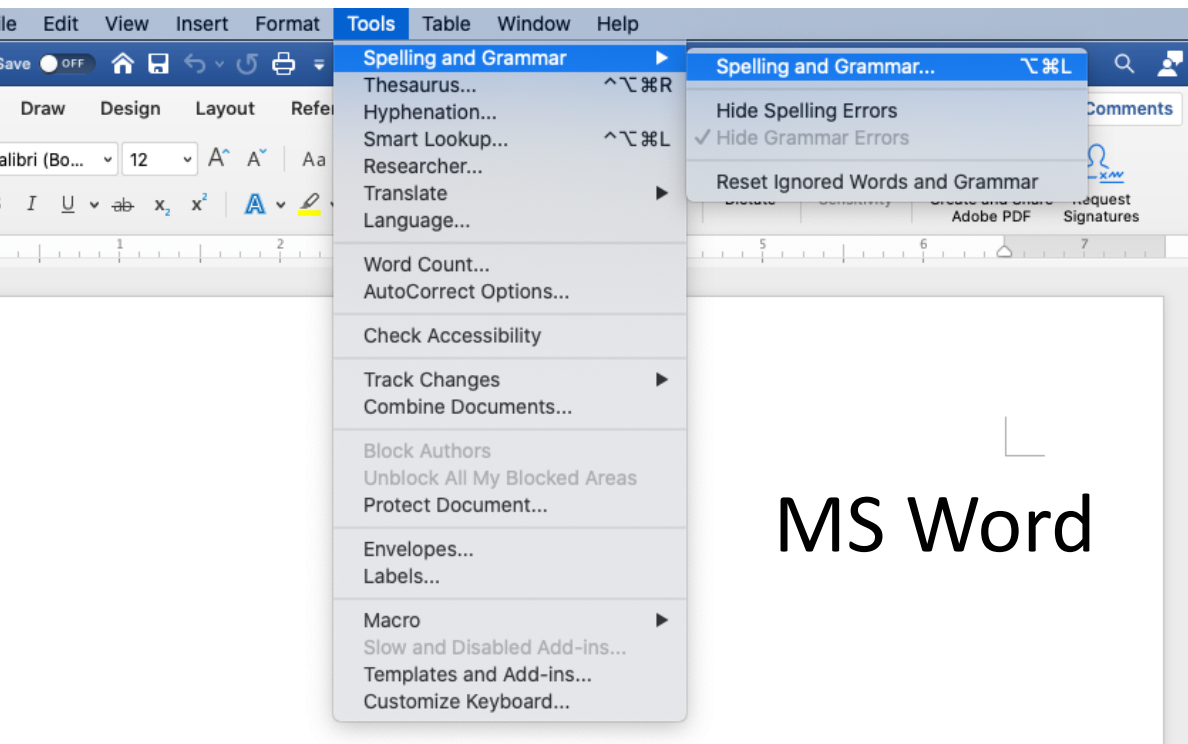
1.1   SubSection A

1.1.1   SubSubSection A

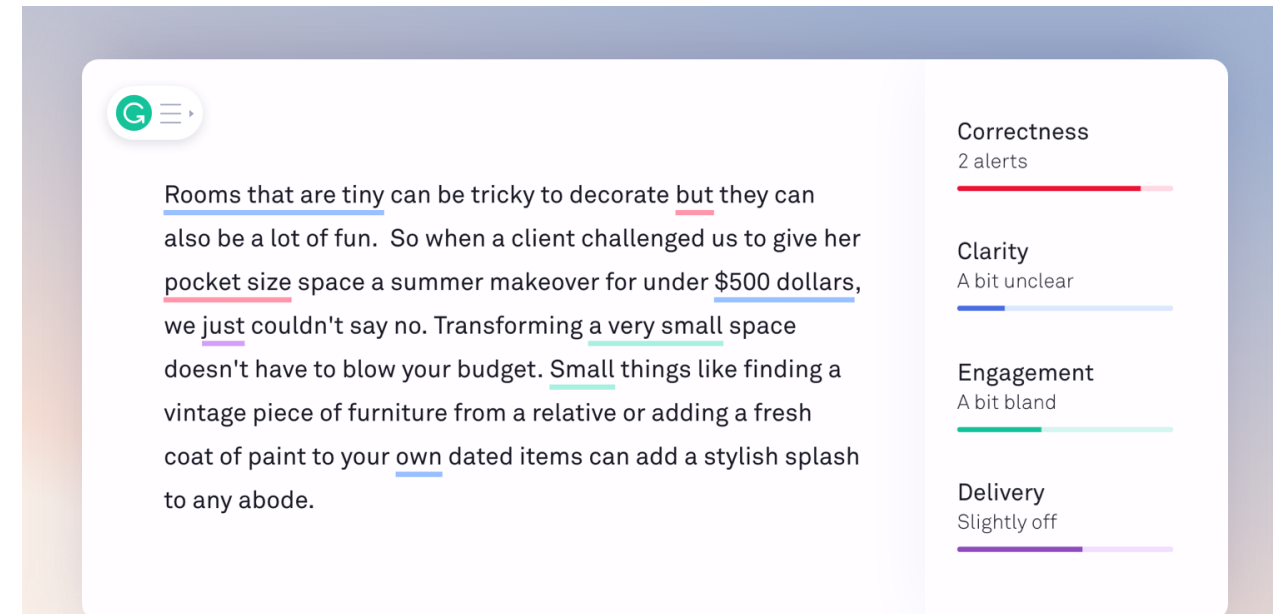# Learning Objectives for Today

- Introductions
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- **Grammar & Spell Check**

Easiest thing but also hardest

- **Typo & Grammar Errors**
- Be annoy when reading a document with Typo & Grammar Errors
  - Are you serious about your document/email/etc. ?

MS Word

Grammarly

Assignment 1: Email in LaTeX

Please convert the self-introduction email into a PDF using LaTeX. All the content should be created in Overleaf.

- Your Name
- Your Student ID
- Your Email Address
- Your Photo
- Your Expectation for this class
- Your Personal Interests

Due

Oct. 20, 11:59:59 PM.

Submission

Send it to newsyangy@gmail.com.

- Sharable link of Overleaf
  (check how to share your Overleaf project: https://www.overleaf.com/learn/how-to/Sharing_a_project)
- PDF file
  (check how to download your pdf: https://www.overleaf.com/learn/how-to/Exporting_your_work_from_Overleaf)

Hi/Dear Mrs./Ms./Mr./Dr./Professor NAME,

I am a student for the course Technical Communication for Computer Scientists. Please kindly find the following information for assignment 0.

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- Email Address: newsyangy@gmail.com
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Best regards/Sincerely/All the best,

Yu Yang
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newsyangy@gmail.com