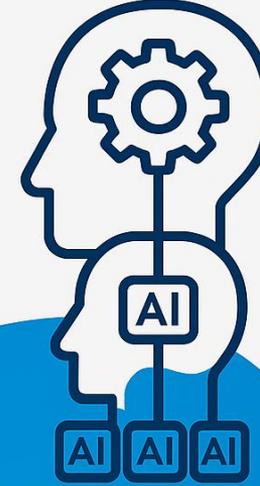




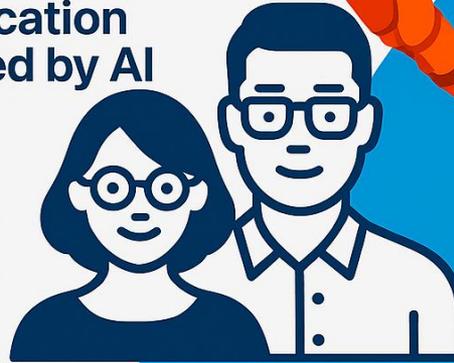
اللجنة الوطنية للإشراف ومتابعة تنفيذ برنامج تدعيم التكوين الأولي  
في الطور الثالث في مؤسسات التعليم العالي- 2025-

# Initial Training of Doctoral Students AI Techniques and Tools Subject



AXIS II: Learning and  
Communication  
Augmented by AI

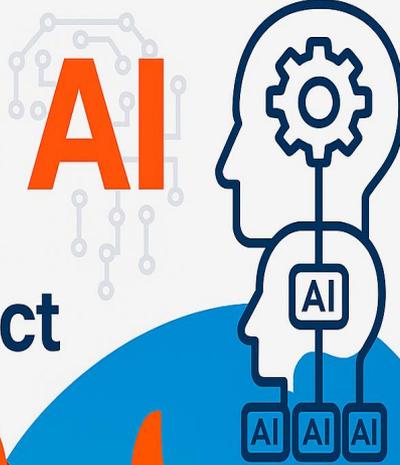
# AI



# Initial Training of Doctoral Students AI Techniques and Tools Subject

AXIS II: Learning and  
Communication  
Augmented by AI

AI



- Axis 2 of the module “**Techniques and Tools of Artificial Intelligence**” focused on a central theme for any researcher:

“**Learning and Communication augmented by AI.**”

- This axis is designed specifically for PhD students in the Humanities and Social Sciences (SSH) and Science and Technology (S&T) branches —to help them better leverage artificial intelligence tools in their research and writing practices.

Two main objectives



- Integrate AI as a tool to support learning and scientific communication.
- Develop a critical mastery of tools for writing and literature review.

**Demystify AI**

1



Definition and history of AI  
What is AI?



**AI as Tool,**

2



Generative AI and prompt engineering

3



AI-Assisted Scientific Writing



4



AI-Assisted Literature Review and Critical Analysis



**Workshop**

5



AI Tools at the Service of the Researcher



AI  
as  
Tool,

3



AI-Assisted  
Scientific Writing



*Enhance PhD students' scientific writing skills through informed use of artificial intelligence tools, such as Grammarly.*

AI  
as  
Tool,

AI-Assisted  
Scientific  
Writing

https://www.grammarly.com/

**grammarly** Product Work Education Pricing Resources Contact Sales Log in [Get Grammarly It's free →](#)

## The easiest way to get on the same page

Work better together with Grammarly, the trusted AI assistant for everyday communication.

[Sign up It's free →](#) [Sign up with Google](#)

By signing up, you agree to the [Terms and Conditions](#) and [Privacy Policy](#). California residents, see our [CA Notice at Collection](#).

*You can sign up for free, or you can sign up with your Google account*

Trusted by 50,000 organizations and 40 million people

Logos: Jira, databricks, ATlassian, align, Washington University in St. Louis, CA.gov, EVERLANE, BlackRock, ZOOM, A STATE UNIVERSITY, zapier, Penn Brand Standards, ASU Arizona State University, Expensify, hackerone, AFFINITY X, salesforce, Upwork

# Grammarly

AI  
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Tool,

AI-Assisted  
Scientific  
Writing



HELLO, OMAR TALBI

## Tell us a little about yourself

We'll use your answers to help you get the most out of Grammarly.

Most of my writing is for:

Three selection cards are shown, each with a radio button in the top-left corner. The first card, labeled 'Work' with a briefcase icon, has an unselected radio button. The second card, labeled 'School' with a graduation cap icon, has a selected radio button (indicated by a green dot). The third card, labeled 'Other projects' with a starburst icon, has an unselected radio button. A red oval highlights the entire selection area.

Select what you're using it for

Step 1 of 4



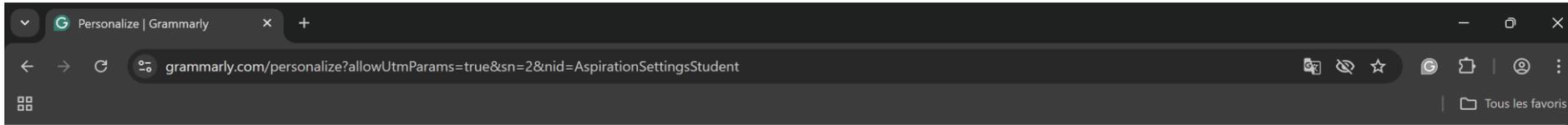
Next



# Grammarly

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Writing



HELLO, OMAR TALBI

I am a:

High school student

College student

Graduate student

Educator

Other

*These are just questions to help Grammarly know better about you and how to best help you out.*

Back

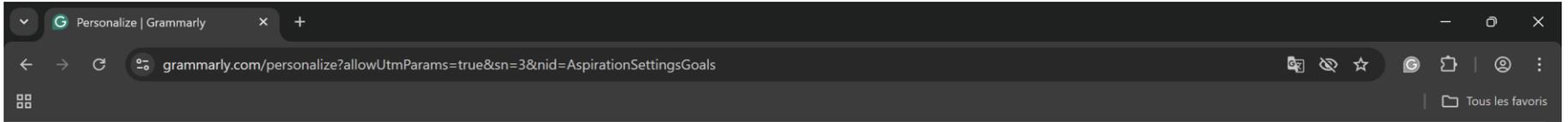
Step 2 of 4



Skip step

Next





HELLO, OMAR TALBI

**I mostly write:**  
Select all that apply.

<input checked="" type="checkbox"/> <b>Papers</b> (research, essays)	<input checked="" type="checkbox"/> <b>Creative content</b> (stories, poetry)
<input checked="" type="checkbox"/> <b>Coursework</b> (presentations, exams)	<input checked="" type="checkbox"/> <b>Public posts</b> (social media, blog posts)
<input checked="" type="checkbox"/> <b>Emails</b> (to classmates, professors)	<input checked="" type="checkbox"/> <b>Career documents</b> (résumés, portfolios)
<input checked="" type="checkbox"/> <b>Applications</b> (admission, scholarship)	<input checked="" type="checkbox"/> <b>Other</b>

Back

Step 3 of 4

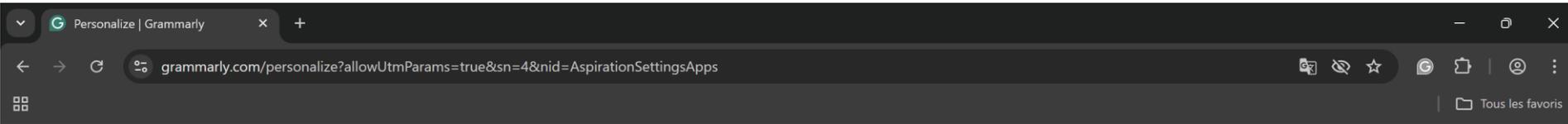


Skip step

Next

*These are just questions to help Grammarly know better about you and how to best help you out.*





HELLO, OMAR TALBI

**I write in the following apps and websites:**  
Select all that apply.

<input checked="" type="checkbox"/> Outlook	<input checked="" type="checkbox"/> Gmail	<input checked="" type="checkbox"/> Google Docs
<input checked="" type="checkbox"/> Word	<input checked="" type="checkbox"/> LinkedIn	<input checked="" type="checkbox"/> Slack
<input checked="" type="checkbox"/> PowerPoint	<input checked="" type="checkbox"/> Google Sheets	<input checked="" type="checkbox"/> Teams
<input type="checkbox"/> Discord	<input type="checkbox"/> WhatsApp	

Select which apps you're using the most

Back

Step 4 of 4  
Skip step

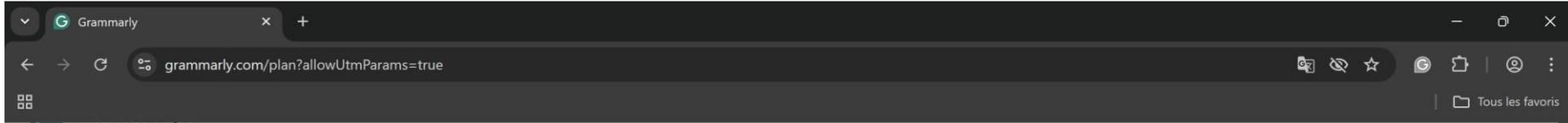
Next



# Grammarly

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Writing



## Ace Your Assignments With Pro

### Free

Get peace of mind with writing that's mistake-free.

**\$0** USD / month

[Continue to Grammarly](#)

- ✓ Write without mistakes
- ✓ See your writing tone
- ✓ Generate text with 100 AI prompts

Best For Students ✦

### Pro

Deliver impactful writing, whether working alone or as a team.

**\$12** USD / member / month, billed annually  
**\$30** when billed monthly

[Get started](#)

- ✓ **Everything included in Free**
- ✓ Rewrite full sentences
- ✓ Adjust your writing tone
- ✓ Stay on-brand
- ✓ Write fluently in English
- ✓ Catch accidental plagiarism
- ✓ Generate text with 2,000 AI prompts

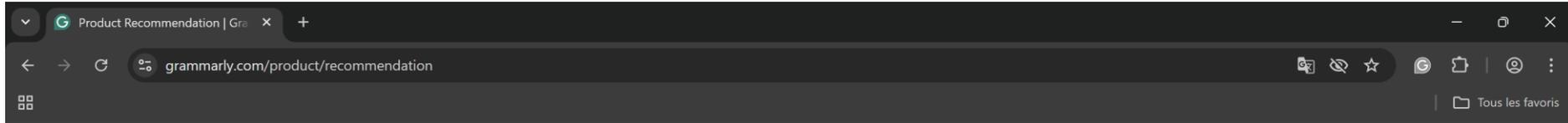
You can continue using the free version, or you can pay for the pro version, whichever you prefer. It breaks down the differences here, but for this tutorial, we are going to stick with the free version.



# Grammarly

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Writing



## Grammarly for Windows + Chrome

Works across apps and websites, including **Google Docs**.

Get Grammarly for Windows + Chrome

Get Grammarly for Windows only

By downloading Grammarly for Windows or the Grammarly browser extension, you agree to the [Terms and Conditions](#) and [Privacy Policy](#). California residents, see our [CA Notice at Collection](#).

See where Grammarly works

*You got two options you can use it just for Windows or you can use it for Windows and Chrome. We recommend using the Windows and Chrome versions so that if you're on Chrome, using any of your applications there Grammarly will also help you out, like for instance, email and that sort of thing.*

Grammarly Browser Extension

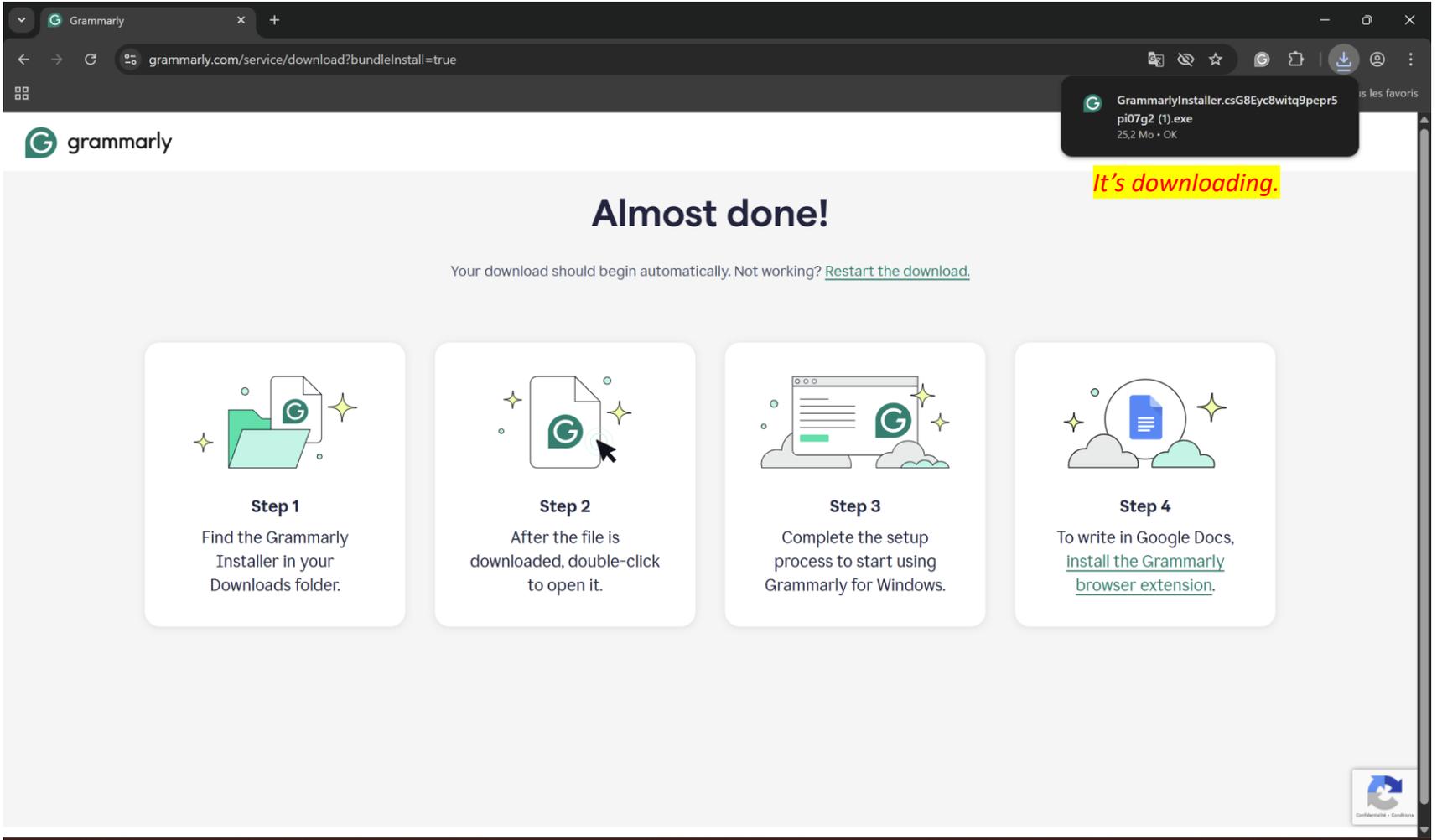
Grammarly for Windows



# Grammarly

AI  
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Scientific  
Writing



Grammarly

grammarly.com/service/download?bundleInstall=true

GrammarlyInstaller.csG8Eyc8witq9pepr5  
pi07g2 (1).exe  
25,2 Mo • OK

**Almost done!**

Your download should begin automatically. Not working? [Restart the download.](#)

**Step 1**  
Find the Grammarly Installer in your Downloads folder.

**Step 2**  
After the file is downloaded, double-click to open it.

**Step 3**  
Complete the setup process to start using Grammarly for Windows.

**Step 4**  
To write in Google Docs, [install the Grammarly browser extension.](#)

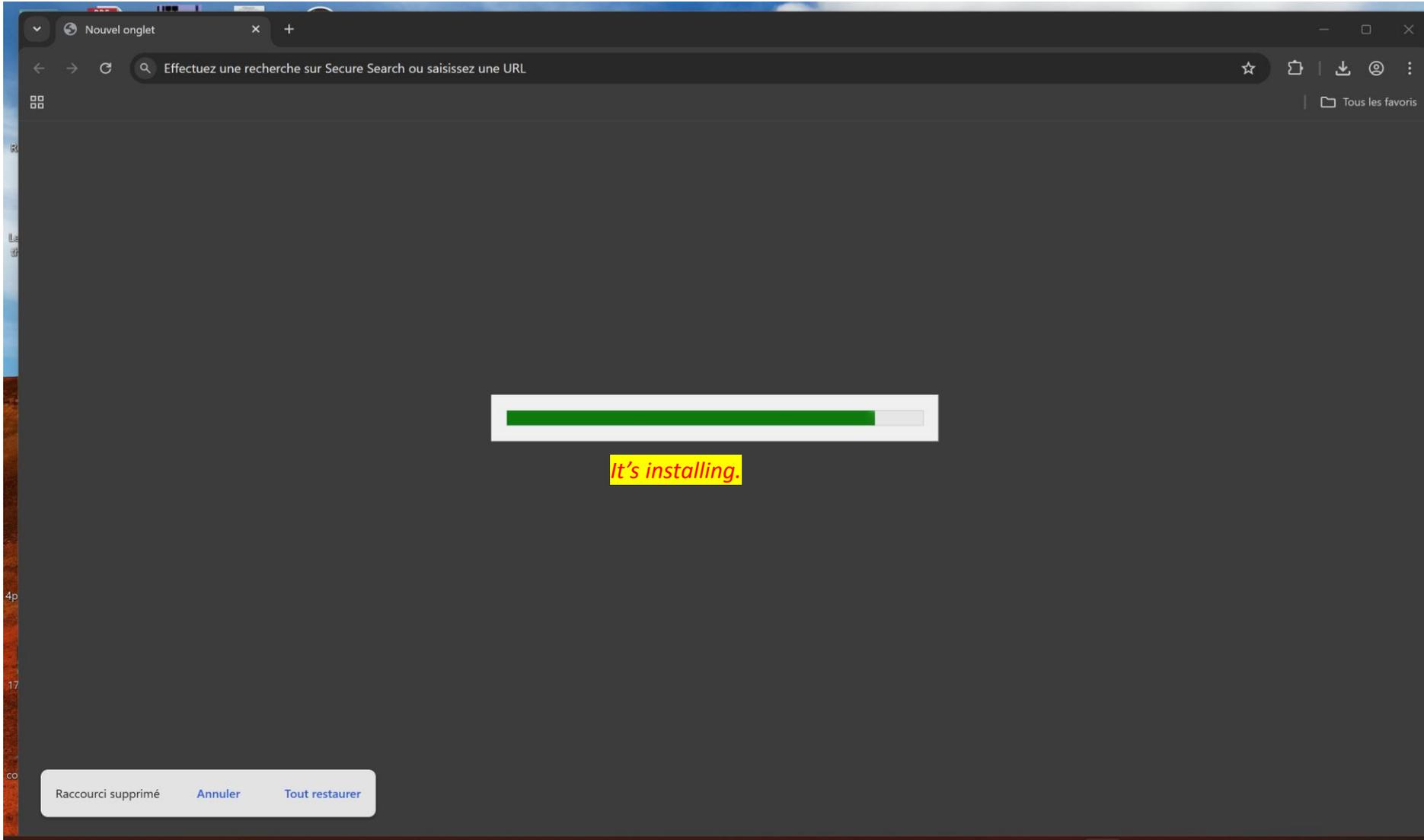
Conférence - Conférence

*It's downloading.*

# Grammarly

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Scientific  
Writing



# Grammarly

AI  
as  
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AI-Assisted  
Scientific  
Writing

Nouvel onglet

Grammarly

grammarly.com/signin/app/consent?scope=grammarly.capi.all&response\_type=code&state=70534bd460794470b40d9277ccb0619&redirect\_uri=grammarly.windows-exten...



Tous les favoris

 grammarly

o.talbi65@gmail.com

Sign in

as o.talbi65@gmail.com

You're about to sign in to your Grammarly account.

Continue to Grammarly

AI  
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Scientific  
Writing

Nouvel onglet

Grammarly

grammarly.com/signin/app/success?client\_id=windowsExtension&code\_challenge=8jKLJi-V7tWklmi7Jl8LsPUVeulVyjxydVEjgYcCkzU&redirect\_uri=grammarly.windows-extensi...



## Signing you in to Grammarly...

Click Open Grammarly on the dialog shown in the browser. If you don't see a dialog, click Open Grammarly below.

Open Grammarly

Having trouble? Try logging in through the [Grammarly Editor](#).

# Grammarly

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Writing

The screenshot shows the Grammarly web application interface. The browser address bar displays the URL: `app.grammarly.com/?payment=free&planName=none&funneltype=free&from=service/installed&install=false`. The page title is "Documents". A sidebar on the left contains navigation options: Documents, Version history, Trash, Account, Apps (with a notification badge '3'), Get Pro, Support, and Sign out (o.talbi65@gmail.com). The main content area features a "Documents" header with buttons for "New document" and "Upload file", and a search bar. A modal window is overlaid on the page, titled "Get the Most from Grammarly". The modal contains an image of a Gmail interface with a Grammarly suggestion box showing "Change the verb form" and "its → it's". Below the image is a "Send" button. To the right of the image, the text reads: "Install Grammarly's browser extension to check your writing on Gmail, Facebook, Twitter, LinkedIn, and all your other favorite sites." At the bottom of the modal is a green button labeled "Add to Chrome It's free", which is circled in red.

# Grammarly



The screenshot shows the Chrome Web Store page for the Grammarly extension. The browser tabs at the top include "Nouvel onglet", "Grammarly", and "Grammarly: AI Writing and Grammar Checker". The address bar shows the URL: [chromewebstore.google.com/detail/grammarly-ai-writing-and/kbfnbcaepfbcioakkpcpgfkobkghlen?pli=1](https://chromewebstore.google.com/detail/grammarly-ai-writing-and/kbfnbcaepfbcioakkpcpgfkobkghlen?pli=1). The page features a search bar with the text "Rechercher des extensions et des thèmes". Below the search bar, there are navigation links for "Découvrir", "Extensions", and "Thèmes". The main heading is "Grammarly: AI Writing and Grammar Checker App". A blue button labeled "Ajouter à Google Chrome" is circled in red. Below the heading, there is a rating of 4.5 stars (42,7 k avis) and a "Partager" link. The extension is categorized as "Extension" and "Workflows/planification", with 46 000 000 utilisateurs. Two promotional cards are visible: "Do more with great writing" showing a sample invitation text with editing options like "Improve it", "Simplify it", "Shorten it", and "Adjust tone"; and "Find a tone that connects with readers" showing a sample sentence "I think we should discuss it further." with a suggestion to use "Let us" or "Let's" for a more confident tone.

# Grammarly

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Nouvel onglet

Grammarly

chromewebstore.google.com/detail/grammarly-ai-writing-and-/kbfnbcaeplbcioakkpcpgfkobkghlhen?pli=1

chrome web store

Découvrir Extensions Thèmes

Grammarly: AI Writing and Grammar Checker App

grammarly.com Sélection 4,5 ★ (42,7 k avis) Partager

Extension Workflows/planification 46 000 000 utilisateurs

Installer "Grammarly: AI Writing and Grammar Checker App" ?

Cette extension Chrome peut :

- Lire et modifier toutes vos données sur tous les sites Web
- Afficher les notifications

Ajouter l'extension Annuler

Do more with great writing

Invite to rooftop BBQ to celebrate Q2 success

I want to extend a special invitation to you for our upcoming rooftop BBQ. We've had a fantastic Q2, and we want to celebrate it with you! The event kicks off at 4 p.m., and we really hope you can make it. We truly appreciate all the hard work and dedication you've put in over the past few months. So, let's take this opportunity to say thank you and enjoy the fruits of our labor together!

Insert Rephrase Improve it Simplify it Shorten it Adjust tone

Find a tone that connects with readers

☆ Pro

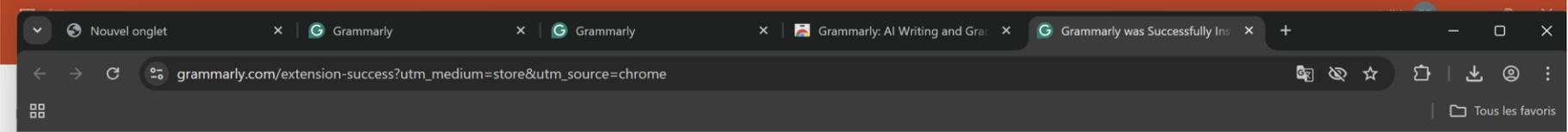
I think we should discuss it further.

Want to sound more confident?

I think we should → Let us Let's

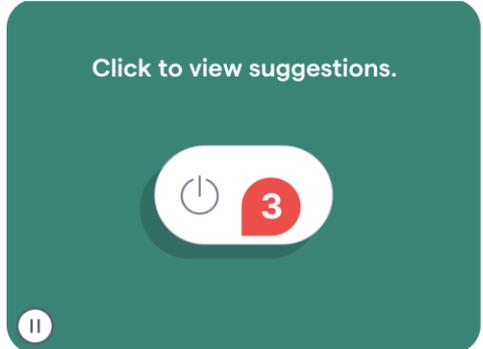
The phrase *I think we should* may sound unconfident. Consider removing it or replacing it with more direct language.

# Grammarly



My Grammarly

## Grammarly for Chrome Is Now Active!



### The Grammarly logo means Grammarly is checking your writing.

When Grammarly has a suggestion, you'll see a number in the circle. When it's the Grammarly logo, it means Grammarly has no suggestions.

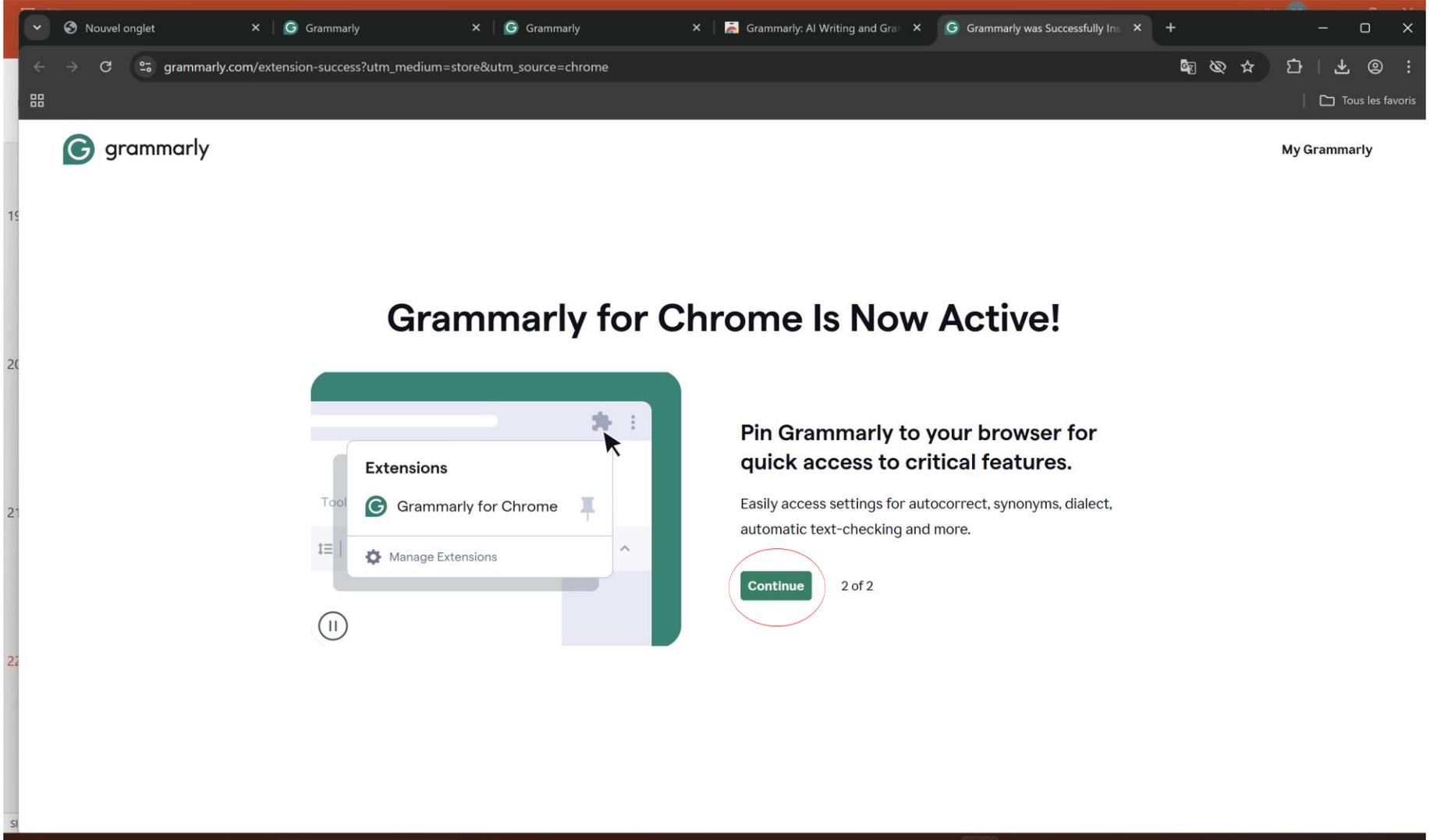


1 of 2

# Grammarly

AI  
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AI-Assisted  
Scientific  
Writing



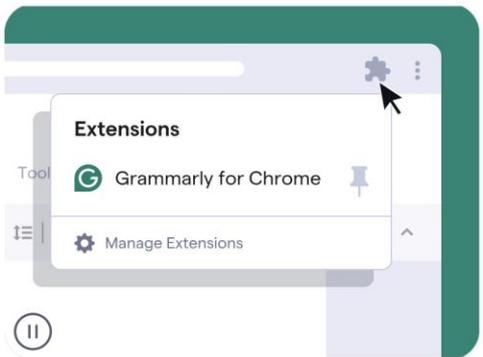
Nouvel onglet x Grammarly x Grammarly x Grammarly: AI Writing and Gra x Grammarly was Successfully Ins x

grammarly.com/extension-success?utm\_medium=store&utm\_source=chrome

grammarly

My Grammarly

## Grammarly for Chrome Is Now Active!



**Extensions**

Tool Grammarly for Chrome

Manage Extensions

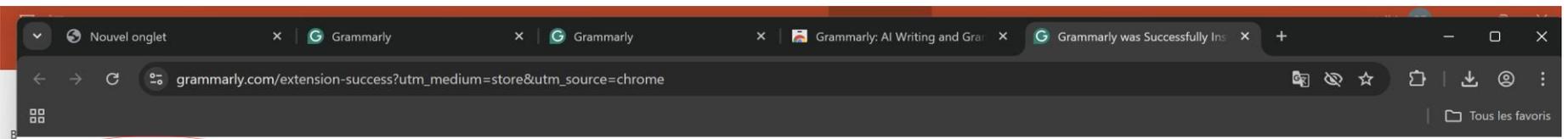
**Pin Grammarly to your browser for quick access to critical features.**

Easily access settings for autocorrect, synonyms, dialect, automatic text-checking and more.

[Continue](#) 2 of 2

# Grammarly

AI as Tool,  
AI-Assisted Scientific Writing



My Grammarly

[Click here](#)

## All set!

Look for the Grammarly widget  when you write on the web.

  
Google Docs  
[Try in Google Docs](#)

  
Gmail  
[Try in Gmail](#)

  
Outlook  
[Try in Outlook](#)



A screenshot of the Grammarly web application interface. The browser's address bar shows the URL: app.grammarly.com/?utm\_medium=store&amp;utm\_source=chrome&amp;gl=1\*1xaeq9u\*\_gcl\_au\*MTU3NDYwMzY3NS4xNzQ1MDYwMDY2. The page features a left sidebar with navigation options: Documents, Version history, Trash, Account, Apps (with a '2' badge), Get Pro, Support, and Sign out (o.talbi65@gmail.com). The main content area is titled "Documents" and includes a "New document" button, an "Upload file" button, and a search bar. A "Get started checklist" is displayed, showing progress for five steps: "Create an account" (checked), "Take a quick tour" (unchecked), "Write on a popular website" (checked), "Explore other Grammarly apps" (checked), and "Customize your experience" (checked). A "Start tour" button is located under the "Take a quick tour" step. A "Today" section shows a "Demo document" from 18 May with the text "The basics. Misspellings and grammatical errors can effect your..." and a red circle with the number "23". A yellow highlight box at the bottom right contains the text: "This is the main page that you will see on Grammarly."

# Grammarly

AI as Tool,  
AI-Assisted Scientific Writing

The screenshot shows the Grammarly web application interface. The browser's address bar displays the URL: `app.grammarly.com/?utm_medium=store&utm_source=chrome&_gl=1*1xaeq9u*_gcl_au*MTU3NDYwMzY3NS4xNzQ1MDYwMDY2`. The page title is "grammarly Free". On the left sidebar, there are navigation options: Documents, Version history, Trash, Account, Apps (with a notification badge '2'), and Get Pro. The main content area is titled "Documents" and includes a "New document" button, an "Upload file" button, and a search bar. A "Get started checklist" is visible, showing progress: "You completed 1 out of 5 steps". The checklist items are: "Create an account" (checked), "Take a quick tour" (unchecked), "Write on a popular website" (checked), "Explore other Grammarly apps" (checked), and "Customize your experience" (checked). A "Start tour" button is located below the checklist. A "Today" section shows a "Demo document" from "18 May" with the text "The basics. Misspellings and grammatical errors can effect your...". The Chrome Extensions menu is open on the right, showing the "Grammarly: AI Writing and..." extension pinned to the toolbar. A yellow highlight is placed over the extension name in the menu.

Pin Grammarly to the toolbar so that it's always there, always available as we need it

# Grammarly

AI  
as  
Tool,

AI-Assisted  
Scientific  
Writing

The screenshot displays the Grammarly web application interface. At the top, the browser's address bar shows the URL: `app.grammarly.com/?utm_medium=store&utm_source=chrome&_gl=1*1xaeq9u*_gcl_au*MTU3NDYwMzY3NS4xNzQ1MDYwMDY2`. The Grammarly logo and 'Free' label are visible in the top left. A sidebar on the left contains navigation options: Documents, Version history, Trash, Account, Apps (with a '2' notification), and Get Pro. The main content area is titled 'Documents' and features a search bar and two buttons: 'New document' (circled in red) and 'Upload file'. Below these is a 'Get started checklist' modal with a progress bar and five items: 'Create an account' (checked), 'Take a quick tour' (unchecked), 'Write on a popular website' (checked), 'Explore other Grammarly apps' (checked), and 'Customize your experience' (checked). A 'Start tour' button is present. To the right, a 'Today' section shows a 'Demo document' card dated '18 May' with the text 'The basics: Misspellings and grammatical errors can effect your...' and a '23' notification badge (circled in red). A yellow text box at the bottom right contains the text: 'We'll be using this demo document, but you can also upload your document or any other file you'd like Grammarly to review..'. The browser's address bar and navigation icons are also visible.

# Grammarly



A screenshot of the Grammarly web editor interface. The browser tabs show "Nouvel onglet", "Grammarly", "Grammarly", "Grammarly: AI Writing and Gra...", and "Demo document - Grammarly". The address bar shows "app.grammarly.com/ddocs/2827749001". The main content area displays a document titled "Demo document" with a score of "63 Overall score". The document text includes sections like "The basics" and "But wait...there's more?". A green modal overlay is centered on the screen with the Grammarly logo, the text "Welcome to the Grammarly Editor", and a "CONTINUE" button circled in red. The right sidebar shows "Review suggestions" with 16 items, including "Pro suggestions" and "Check for plagiarism and AI text". The bottom of the page shows a rich text editor toolbar and "174 words".

Demo document

Goals 63 Overall score

Review suggestions Write with generative AI Check for AI text & plagiarism

## The basics

Mispellings and grammatical errors can affect your credibility. The same goes for misused commas, and other typos. Grammarly underline these issues in red to help you correctly write the sentence.

Underlines that are blue indicate that a sentence that is unnecessarily wordy. You'll find out how you revise a wordy sentence in an effort to be more concise.

## But wait...there's more?

Grammarly Premium can give you very helpful suggestions. Passive voice can be fixed by Grammarly. It can also help you avoid word-choice mistakes. It can also help you avoid switching between e-mail and email or the U.S.A. and the USA.

It can even help when you wanna refine ur slang or formality level. That's especially useful when writing for a broad audience ranging from

**Welcome to the Grammarly Editor**

Use it to create and upload your documents and edit them with Grammarly's writing assistance.

**CONTINUE**

Review suggestions 16

Correctness Clarity Engagement Delivery

★ Pro suggestions 11

Correct your spelling Mispellings

Use the right word effect

Correctness - Remove the comma ...for misused commas and other...

Accept Dismiss

Remove a space punctuation .

Change the verb form showed

Unsplit the infinitive to correctly write the sentence

Check for plagiarism and AI text

B I U | H1 H2 | | |

174 words

# Grammarly

The image shows a screenshot of the Grammarly web application. The browser address bar shows "app.grammarly.com/ddocs/2827749001". The document title is "Demo document" with a "Goals" icon and a "66 Overall score" badge. The main text of the document is as follows:

**The basics**

Mispellings and grammatical errors can effect your credibility. The same goes for misused commas and other types of punctuation. Not only will Grammarly underline these issues in red, it will also showed you how to correctly write the sentence.

Underlines that are blue indicate that Grammarly has spotted a sentence that is unnecessarily wordy. You'll find suggestions that can possibly help you revise a wordy sentence in an effortless manner.

**But wait...there's more?**

Grammarly Premium can give you very helpful feedback on your writing. Passive voice can be fixed by Grammarly, and it can handle classical word-choice mistakes. It can also help with inconsistencies such as switching between e-mail and email or the U.S.A. and the USA.

It can even help when you wanna refine ur slang or formality level. That's especially useful when writing for a broad audience ranging from

At the bottom, there is a rich text editor with icons for bold, italic, underline, heading, list, link, and undo, and a word count of "174 words".

The right sidebar is titled "Review suggestions" and shows a progress bar for "Correctness" (circled in red), "Clarity", "Engagement", and "Delivery". Below this, it says "Pro suggestions 11". A red box highlights the "Accept" button for the first suggestion, "Correctness - Correct your spelling". Below that, the suggestion "Mispellings Mispellings and grammatical..." is shown with an "Accept" button also circled in red. Other suggestions include "Use the right word effect", "Remove a space punctuation .", "Change the verb form showed", "Unsplit the infinitive to correctly write the sentence", and "Remove wordiness Underlines that are blue".

The screenshot shows the Grammarly web interface. The browser address bar displays `app.grammarly.com/ddocs/2827749001`. The document title is "Demo document" with a "74 Overall score". The main text contains two paragraphs. The first paragraph, "The basics", discusses misspellings and punctuation. The second paragraph, "But wait...there's more?", discusses Grammarly Premium features. A sentence in the second paragraph is underlined in blue: "Underlines that are blue indicate that Grammarly has spotted a sentence that is unnecessarily wordy. You'll find suggestions that can possibly help you revise a wordy sentence in an effortless manner." The right sidebar shows "Review suggestions" with tabs for Correctness, Clarity, Engagement, and Delivery. The Clarity tab is active, showing 10 "Pro suggestions". One suggestion is highlighted: "Clarity - Remove wordiness". Below it, the blue underlined sentence is shown with an "Accept" button circled in red. Other suggestions include "Remove wordiness" and "Change the wording".

**Demo document** Goals 74 Overall score

## The basics

Misspellings and grammatical errors can affect your credibility. The same goes for misused commas and other types of punctuation. Not only will Grammarly underline these issues in red, but it will also show you how to correctly write the sentence.

Underlines that are blue indicate that Grammarly has spotted a sentence that is unnecessarily wordy. You'll find suggestions that can possibly help you revise a wordy sentence in an effortless manner.

## But wait...there's more?

Grammarly Premium can give you very helpful feedback on your writing. Passive voice can be fixed by Grammarly, and it can handle classical word-choice mistakes. It can also help with inconsistencies such as switching between e-mail and email or the U.S.A. and the USA.

It can even help when you wanna refine ur slang or formality level. That's especially useful when writing for a broad audience ranging from

Review suggestions Write with generative AI Check for AI text & plagiarism

Review suggestions 5

Correctness Clarity Engagement Delivery

★ Pro suggestions 10

Clarity - Remove wordiness ⓘ

Underlines that are blue Blue underlines indicate that...

Accept Dismiss ...

Remove wordiness a sentence that is unnecessarily wordy

Remove redundancy possibly

Change the wording revise a wordy sentence in an effortless manner

Check for plagiarism and AI text

174 words

# Grammarly

## Demo document

Goals

78 Overall score

### But wait...there's more?

Grammarly Premium can give you very helpful feedback on your writing. Passive voice can be fixed by Grammarly, and it can handle classical word-choice mistakes. It can also help with inconsistencies such as switching between e-mail and email or the U.S.A. and the USA.

It can even help when you wanna refine ur slang or formality level. That's especially useful when writing for a broad audience ranging from businessmen to friends and family, don't you think? It'll inspect your vocabulary carefully and suggest the best word to make sure you don't have to analyze your writing too much.

Review suggestions

Write with generative AI

Check for AI text & plagiarism

### Review suggestion 1

Correctness

Clarity

Engagement

Delivery

We found **10** more ways to improve your text with Pro. Upgrade for unlimited access.

- 3 Vocabulary
- 2 Consistency
- 1 Clarity
- 4 Formality and more

Get Pro

Dismiss

B I U | H1 H2 | | | | | | |

166 words ^

Check for plagiarism and AI text



Search



3:08 PM  
5/18/2025



The score was improved following the corrections made.

The screenshot shows the Grammarly web interface. At the top, the browser tabs include 'Nouvel onglet', 'Grammarly', and 'Demo document - Grammarly'. The address bar shows 'app.grammarly.com/ddocs/2827749001'. The main content area is titled 'Demo document' and contains the following text:

### The basics

Misspellings and grammatical errors... goes for misused commas and other types of punctuation. Not only will Grammarly underline these issues in red, but it will also show you how to correctly write the sentence.

Blue underlines indicate that Grammarly has spotted an unnecessarily wordy sentence. You'll find suggestions that can help you effortlessly revise a wordy sentence.

### But wait...there's more?

Grammarly Premium can give you very helpful feedback on your writing. Passive voice can be fixed by Grammarly, and it can handle classical word-choice mistakes. It can also help with inconsistencies such as switching between e-mail and email or the U.S.A. and the USA.

It can even help when you wanna refine ur slang or formality level. That's especially useful when writing for a broad audience ranging from

At the top right, a 'Goals' button is circled in red, with '78 Overall score' displayed next to it. A yellow callout box points to this score with the text: 'The score was improved following the corrections made.' A 'Set some goals' dialog box is open in the center, with a 'Next' button highlighted in green. The right sidebar contains options like 'Review suggestions', 'Write with generative AI', and 'Check for AI text & plagiarism'. The bottom of the page shows a word count of '166 words'.

# Grammarly



The screenshot shows the Grammarly web interface. The browser tabs include "Nouvel onglet", "Grammarly", "Grammarly", "Grammarly: AI Writing and...", "Demo document - Gram...", and "Google Traduction". The address bar shows "app.grammarly.com/ddocs/2827749001". The main content area displays a document titled "Demo document" with a "77 Overall score". The document text includes sections like "The basics" and "But wait...there's more?". The right sidebar has a "Write with generative AI" button circled in red. Below it, a "User prompt." box contains the text "write a greeting for a coordination meeting" and a green arrow button.

**Write with generative AI**

**What do you want to do?**  
Here are some ideas

- Improve it
- Find claims I should cite
- More ideas

**User prompt.**  
write a greeting for a coordination meeting



## Generative AI's response to the user's prompt

The screenshot shows the Grammarly web interface. The main document area contains the following text:

### The basics

Misspellings and grammatical errors can affect your credibility. The same goes for misused commas and other types of punctuation. Not only will Grammarly underline these issues in red, but it will also show you how to correctly write the sentence.

Blue underlines indicate that Grammarly has spotted an unnecessarily wordy sentence. You'll find suggestions that can help you effortlessly revise a wordy sentence.

### But wait...there's more?

Grammarly Premium can give you very helpful feedback on your writing. Passive voice can be fixed by Grammarly, and it can handle classical word-choice mistakes. It can also help with inconsistencies such as switching between e-mail and email or the U.S.A. and the USA.

It can even help when you wanna refine ur slang or formality level. That's especially useful when writing for a broad audience ranging from

At the bottom of the document, there is a yellow highlighted box with the text: *Generative AI's response to the user's prompt*. A red arrow points from this box to the AI-generated text in the right sidebar.

The right sidebar shows the "Write with generative AI" section. The user's prompt is: "write a greeting for a coordination meeting". The AI response is:

Subject: Coordination Meeting - Welcome!

Dear Team,

I hope this message finds you well! I am excited to welcome you to our coordination meeting. Today, we'll be discussing our progress and aligning our efforts to ensure we are all on the same page moving forward.

Your contributions are invaluable, and I'm looking forward to our collaborative discussions. Let's leverage this opportunity to share ideas, address any challenges, and strategize for our upcoming goals.

Thank you for your dedication and hard work. See you all in the meeting!

Best regards,  
[Your Name]

Below the AI response, there are suggestions: "Make it persuasive", "Acknowledge Grammarly gen AI use", and "More ideas". At the bottom of the sidebar, there is a text input field labeled "Tell us to...".

# Grammarly

AI  
as  
Tool,

AI-Assisted  
Scientific  
Writing

The screenshot shows the Grammarly web interface. The browser tabs include 'Nouvel onglet', 'Grammarly', 'Grammarly: AI Writing and', 'Demo document - Gramm', and 'Google Traduction'. The address bar shows 'app.grammarly.com/ddocs/2827749001'. The document title is 'Demo document' with a 'Goals' icon and a '77 Overall score' badge. The main text area contains the following content:

## The basics

Misspellings and grammatical errors can affect your credibility. The same goes for misused commas and other types of punctuation. Not only will Grammarly underline these issues in red, but it will also show you how to correctly write the sentence.

Blue underlines indicate that Grammarly has spotted an unnecessarily wordy sentence. You'll find suggestions that can help you effortlessly revise a wordy sentence.

**But wait...there's more?**

Grammarly Premium can give you very helpful feedback on your writing. Passive voice can be fixed by Grammarly, and it can handle classical word-choice mistakes. It can also help with inconsistencies such as switching between e-mail and email or the U.S.A. and the USA.

It can even help when you wanna refine ur slang or formality level. That's especially useful when writing for a broad audience ranging from

The right sidebar has three main sections: 'Review suggestions', 'Write with generative AI', and 'Check for AI text & plagiarism'. Under 'Write with generative AI', there are two sub-sections: 'Ideas for school' and 'Adjust tone'. The 'Adjust tone' section is circled in red and contains the following options:

- Make it persuasive
- Make it assertive
- Sound confident
- Make it constructive
- Make it diplomatic
- Make it empathetic
- Make it friendly
- Make it inspirational
- Sound casual
- Sound formal

A yellow callout box with the text 'More ideas to apply to the generated text.' has a red arrow pointing to the 'Adjust tone' section. The bottom of the interface shows a rich text editor with icons for bold, italic, underline, heading (H1, H2), link, list, and text color, along with a word count of '166 words'.



app.grammarly.com/ddocs/2827749001

**Demo document** Goals 77 Overall score

## The basics

Misspellings and grammatical errors can affect your credibility. The same goes for misused commas and other types of punctuation. Not only will Grammarly underline these issues in red, but it will also show you how to correctly write the sentence.

Blue underlines indicate that Grammarly has spotted an unnecessarily wordy sentence. You'll find suggestions that can help you effortlessly revise a wordy sentence.

**But wait...there's more?**

Grammarly Premium can give you very helpful feedback on your writing. Passive voice can be fixed by Grammarly, and it can handle classical word-choice mistakes. It can also help with inconsistencies such as switching between e-mail and email or the U.S.A. and the USA.

It can even help when you wanna refine ur slang or formality level. That's especially useful when writing for a broad audience ranging from

166 words

Review suggestions | **Write with generative AI** | Check for AI text & plagiarism

Insert | Retry

😊 Make it friendly

Subject: Coordination Meeting - Let's Connect!

Hey Team!

I hope you're all doing well! I'm really looking forward to our coordination meeting today. It's a great chance for us to catch up on our progress and make sure we're all aligned as we move forward.

Your thoughts and ideas are super important, and I can't wait to hear what everyone has to share. Let's use this time to collaborate, tackle any challenges together, and plan for our upcoming goals!

Thanks for all the hard work you do. Can't wait to see you all in the meeting!

Shorten it

Make it sound academic

More ideas

Tell us to...

*New text generated following the applied modifications.*



A screenshot of the Grammarly web application interface. The browser tabs show "Nouvel onglet", "Grammarly", "Grammarly", "Grammarly: AI Writing and...", "Demo document - Gram...", and "Google Traduction". The address bar shows "app.grammarly.com/ddocs/2827749001". The main content area displays a document titled "Demo document" with a score of "77 Overall score". The document text includes sections: "The basics", "But wait...there's more?", and "It can even help when you wanna refine ur slang or formality level. That's especially useful when writing for a broad audience ranging from". The right sidebar shows the "Write with generative AI" tab selected, with a list of suggestions. The first suggestion is "Shorten it" with a subject line "Subject: Coordination Meeting - Let's Connect!". Below it is a salutation "Hi Team!" and two paragraphs of text. The "Insert" button for this suggestion is circled in red. A yellow highlight box with the text "Insert the text into the document." is placed over the "Insert" button. At the bottom, the text "166 words" is visible.

Insert the text into the document.

Insert

The screenshot shows the Grammarly AI writing interface. The main document area contains the following text:

Subject: Coordination Meeting - Let's Connect!

Hi Team!

I hope you're all doing well! I'm excited for our coordination meeting today. It's a great opportunity to catch up on our progress and ensure we're aligned moving forward.

I can't wait to hear your thoughts and ideas. Thanks for all your hard work, and see you in the meeting!

Best,  
[Your Name]

**[Your Position] The basics**

Misspellings and grammatical errors can affect your credibility. The same goes for misused commas and other types of punctuation. Not only will Grammarly underline these issues in red, but it will also show you how to correctly write the sentence.

The sidebar on the right is titled "Write with generative AI" and contains the following options:

- Review suggestions
- Check for AI text & plagiarism
- Shorten it
- Make it sound academic
- Acknowledge Grammarly gen AI use
- More ideas

The text "Inserted text." is highlighted in yellow next to the main document content.

# Grammarly

AI  
as  
Tool,

AI-Assisted  
Scientific  
Writing

The screenshot displays the Grammarly web application interface. At the top, there are several browser tabs and a URL bar showing 'app.grammarly.com/ddocs/2827749001'. The main interface is divided into three main sections:

- Left Sidebar:** A menu with options like 'My Grammarly', 'DOCUMENT' (containing 'New document', 'Upload file', and 'Download' which is circled in red), 'EDIT' (containing 'Undo', 'Redo', 'Cut', 'Copy', 'Paste', 'Select all'), and 'ACCOUNT' (containing 'Editor settings', 'Omar Talbi', 'Get Pro', and 'Language preference').
- Main Text Area:** Contains a document titled 'Coordination Meeting - Let's Connect!'. The text includes: 'you're all doing well! I'm excited for our coordination meeting. It's a great opportunity to catch up on our progress and ensure we are aligned moving forward. I would like to wait to hear your thoughts and ideas. Thanks for all your hard work and see you in the meeting!'. A yellow highlight is placed over the sentence 'The document can be downloaded.'.
- Right Panel:** A 'Review suggestions' panel with a '78 Overall score' and 'Goals' button. It shows a progress bar for 'Correctness', 'Clarity', 'Engagement', and 'Delivery'. Below this, it lists 'Pro suggestions 12' and a 'Pro suggestion - Free sample'. The suggestions include: 'Unsplit the infinitive to correctly write the sentence', 'Choose a different word very helpful', 'Change the word classical', and 'Want to sound more confident? That's especially useful when writing for a broad...'. At the bottom of the panel, there is a 'Check for plagiarism and AI text' button.

# Grammarly

AI as Tool,

AI-Assisted Scientific Writing

The screenshot displays the Grammarly web application interface. At the top, the browser tabs show 'Nouvel onglet', 'Grammarly', 'Grammarly: AI Writing and...', 'Demo document - Gram...', and 'Google Traduction'. The address bar shows 'app.grammarly.com/ddocs/2827749001'. The main content area is titled 'Demo document' and shows a document with several lines of text. A right-click context menu is open over a highlighted sentence: 'I hope you're all doing well! I'm excited for our coordination meeting today. It's a great opportunity to catch up on our progress and ensure we're aligned moving forward.' The menu includes options such as 'Emoji', 'Couper', 'Copier', 'Coller', 'Coller en texte brut', 'Tout sélectionner', 'Ouvrir en mode Lecture', 'Rechercher "Subject: Coordination Meeting - Let's Connect..." avec Secure Search', 'Imprimer...', 'Correcteur orthographique', 'Sens de l'écriture', and 'Inspector'. A yellow highlight is placed over the 'Copier' option with the text 'Or it can be copied and pasted.' The right sidebar shows 'Review suggestions' with a '78 Overall score' and a 'Pro suggestion - Free sample' card. The bottom of the interface shows a toolbar with icons for bold, italic, underline, and heading styles.

# Grammarly



Browser tabs: Nouvel onglet, Grammarly, Grammarly, Grammarly, Ordinateurs, Demo docu, Action requi, Boîte de réce, Google Docs

Address bar: docs.google.com/document/u/1/?tgif=d

Search: Recherche

Documents récents

- Intelligent System Stud-E** (20 août 2022)
  - Introduction
  - Classification Pacts
- DB Design** (20 août 2022)
  - Introduction
  - Diagram
- Introduction** (18 août 2022)
- System design** (9 août 2022)
  - Introduction
  - High-level system design
- ML** (12 juil. 2022)
  - Introduction
  - Model
- Part 01 Introduction docx**
- Multi Role Project**
- PIBI**
- Document sans titre**
- Response to Reviewers d**

Grammarly is used in other applications, such as Google Docs.



# Grammarly

AI  
as  
Tool,

AI-Assisted  
Scientific  
Writing

The screenshot shows a Google Docs interface with the document titled "Intelligent System Stud-E". The document content is as follows:

## Introduction

Today, intelligent systems with artificial intelligence capabilities frequently rely on machine learning (ML). ML refers to a system's ability to learn from problem-specific training data in order to automate the process of developing analytical models and solving associated tasks (Janiesch et al., 2021). According to the same author, Deep learning (DL) is a ML concept based on artificial neural networks. DL models outperform shallow ML models and traditional data analysis methodologies in a wide range of applications.

In this section, we will go through how we built our intelligent system Stud-E, from how we classified posts to how we recommended it in the feed.

## Classification Posts

To solve NLP challenges, language models primarily used recurrent neural networks (RNN), Convolutional Neural Networks (CNN), and Long Short-Term Memory (LSTM). Although these models are competent, the Transformer is viewed as a huge enhancement since it doesn't require data sequences to be processed in any particular order, as RNNs, CNNs, and LSTMs do. This resulted in the creation of pre-trained models such as BERT (Bidirectional Encoder Representations from Transformers), which was trained on huge volumes of linguistic data before its release (Goldberg, 2019; Ezen-Can, 2020).

In the bottom right corner, a yellow highlight contains the text: "We can rewrite a passage using Grammarly." Below this, a "Rewrite with Grammarly" button is circled in red.

# Grammarly

The screenshot shows a Google Docs document titled "Intelligent System Stud-E" with a Grammarly sidebar open on the right. The document text is partially highlighted in blue. The sidebar shows suggestions for improving the text, with "Improve it" highlighted. The document text is as follows:

## Introduction

Today, intelligent systems with artificial intelligence capabilities frequently rely on machine learning (ML). ML refers to a system's ability to learn from problem-specific training data in order to automate the process of developing analytical models and solving associated tasks (Janiesch et al., 2021). According to the same author, Deep learning (DL) is a ML concept based on artificial neural networks. DL models outperform shallow ML models and traditional data analysis methodologies in a wide range of applications.

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## Classification Posts

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The Grammarly sidebar on the right shows the following suggestions:

- Ideas for school**
  - Make it sound academic
  - Suggest counterarguments
  - Give me a research plan
  - Get Grammarly gen AI in-text citation
  - Suggest cuts
- Write**
  - Create a TL;DR
  - Turn bullets to prose
- Rewrite**
  - Shorten it
  - Clean up notes
  - Improve it** (highlighted)
  - Make it more descriptive
- Tell us to...

At the bottom right of the image, there is a yellow highlight with the text: **We can improve it.**

# Grammarly

A screenshot of a Google Docs document titled "Intelligent System Stud-E" with a Grammarly AI writing assistant overlay. The document content includes an "Introduction" section with highlighted text and a "Classification Posts" section. The Grammarly panel on the right offers suggestions such as "Improve it", "Shorten it", and "Make it sound academic". The "Improve it" suggestion is expanded, showing a detailed paragraph of text. A red circle highlights the "Insert" button in the expanded suggestion, and a yellow callout box with the text "And insert it." points to it. The browser's address bar shows the document URL: docs.google.com/document/d/1cxypj9diHU01rcGDgo5G2\_Jukl1YQYicOsMmbbLTZo/edit?tab=t.0. The browser tabs include "Nouvel on", "Grammarly", "Ordinateu", "Demo doc", "Action rec", "Related w", "Boîte de r", and "Intelligent". The document's menu bar includes "Fichier", "Edition", "Affichage", "Insertion", "Format", "Outils", "Extensions", and "Aide". The toolbar shows various editing tools and a font size of 12. The document content includes the following text:

**Introduction**

Today, intelligent systems with artificial intelligence capabilities frequently rely on machine learning(ML). ML refers to a system's ability to learn from problem-specific training data in order to automate the process of developing analytical models and solving associated tasks(Janiesch et al., 2021). According to the same author, Deep learning (DL) is a ML concept based on artificial neural networks. DL models outperform shallow ML models and traditional data analysis methodologies in a wide range of applications.

In this section, we will go through how we built our intelligent system Stud-E, from how we classified posts to how we recommended it in the feed.

**Classification Posts**

To solve NLP challenges, language models primarily used recurrent neural networks (RNN), Convolutional Neural Networks (CNN),and Long Short-Term Memory(LSTM). Although these models are competent, the Transformer is viewed as a huge enhancement since it doesn't require data sequences to be processed in any particular order, as RNNs ,CNNs and LSTMs do. This resulted in the creation of pre-trained models such as BERT(Bidirectional Encoder Representations from Transformers), which was trained on huge volumes of linguistic data before its release(Goldberg, 2019; Ezen-Can,2020).