

CourseBuddyAI User Guide Documentation

1. Software Installation

1.1. Chrome Web Store Installation (Recommended)

CourseBuddyAI is currently available as a browser extension on the Chrome web store.

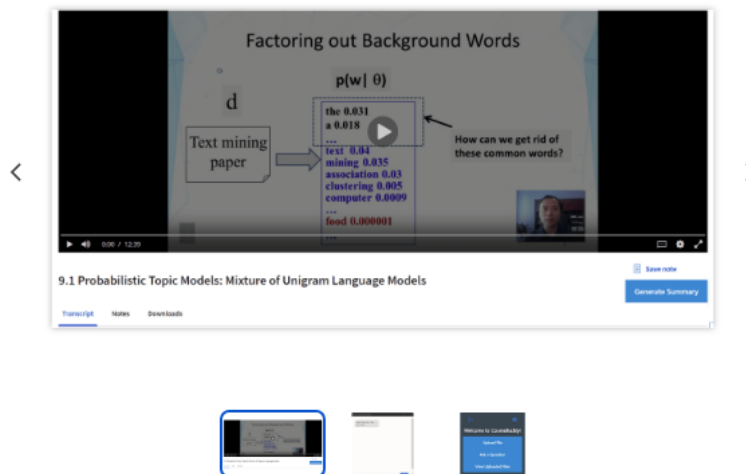
Note: It can only be accessed and installed from the below link

<https://chromewebstore.google.com/detail/coursebuddyai/lcoikcmmgmfmccakgbfgobbnmamaibnhm?hl=en>

1. Click on the Add to Chrome button next to the extension.



Extension Tools




Overview

CourseBuddyAI is a Chrome extension that enhances the Coursera Platform, allowing users to upload lecture files for summarization.

CourseBuddyAI: Enhance Your Coursera Learning Experience with the power of AI!

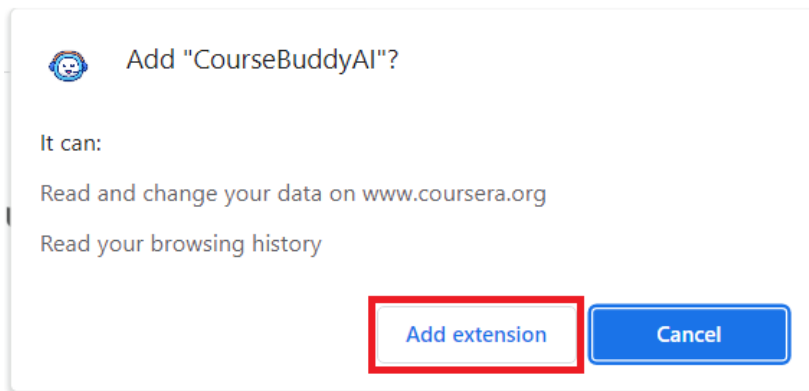
CourseBuddyAI is your ultimate companion for Coursera courses, designed to enhance your learning experience by providing automated summaries of course content. It leverages the power of ChatGPT to generate concise and informative summaries from lecture transcripts/slides and answer students questions through a chatbot interface.

 Features:

CourseBuddyAI offers a range of features to streamline your learning process:

- Automated Summaries: Generate concise summaries of course content from uploaded lecture transcripts and slides (PDF/PPT).

2. A confirmation dialog box will appear. Click on Add extension to confirm.



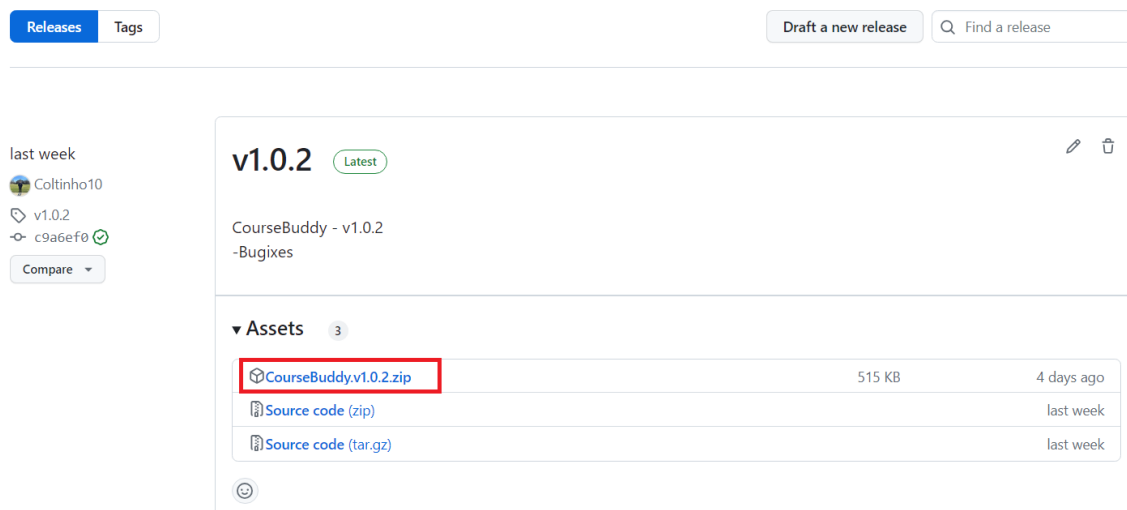
3. The extension will now be downloaded and added to your Chrome browser. You can see it in the top right corner of the browser, next to the address bar.
4. If you can't see the extension, click on the puzzle piece icon in the top right corner to see all your extensions.
5. It recommended you pin the extension to your toolbar for easy access.

1.2. Manual Installation

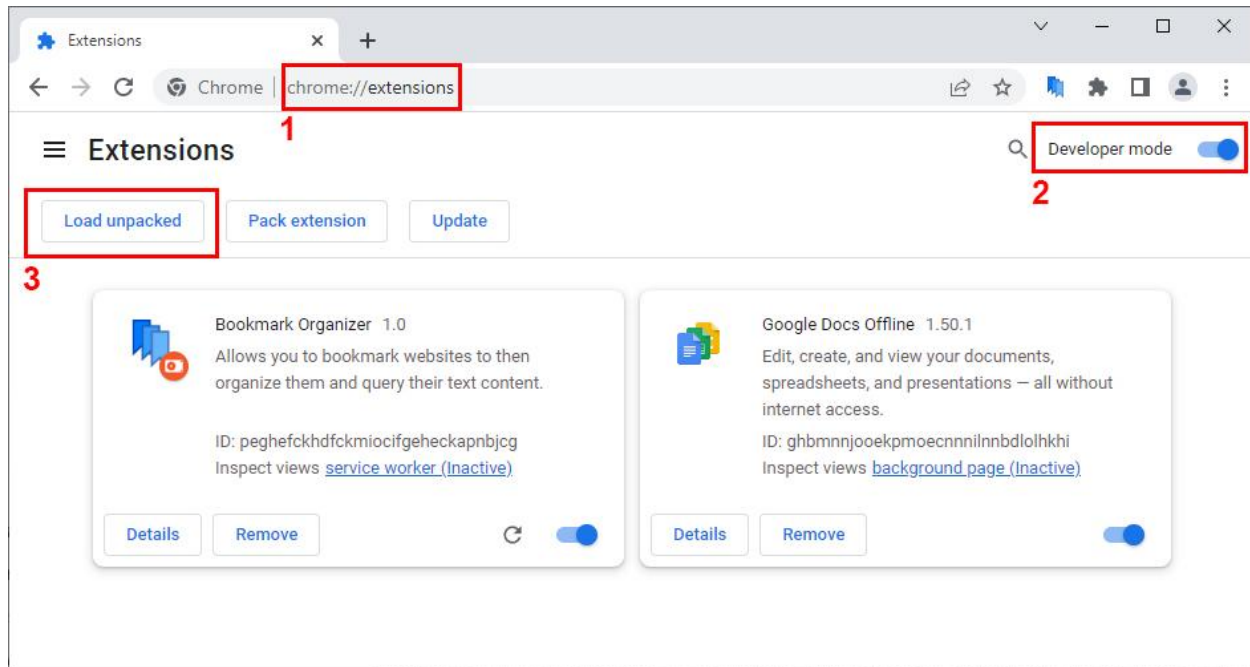
If you would like to install it manually instead, navigate to our GitHub repo releases page:

https://github.com/abaldeo/CS410_CourseProject/releases

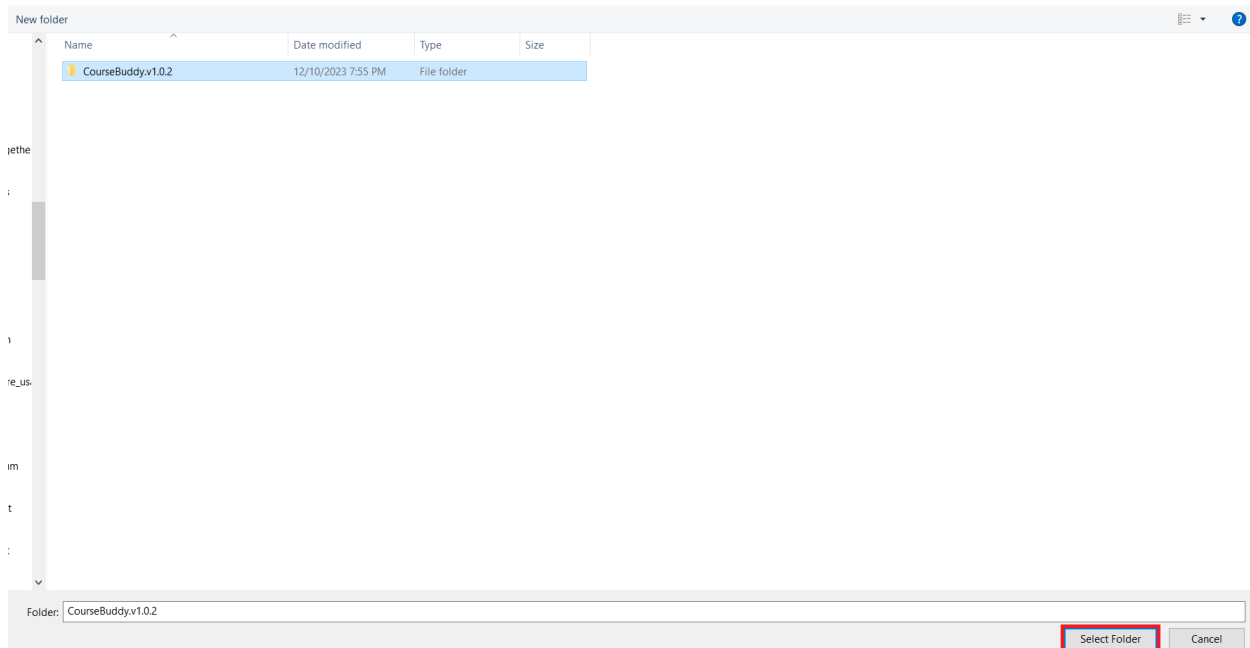
1. Find the latest release and download the zip file that starts with “CourseBuddy”



2. Extract the downloaded zip file to a folder on your computer.
3. In a new Chrome tab, navigate to the URL: **chrome://extensions**
4. Enable "Developer mode" if it is disabled
5. Click the "Load unpacked" button



6. Navigate the the unzipped extension folder and select it to import it



7. It recommended you pin the extension to your toolbar for easy access.

2. Software Usage Guide

PLEASE NAVIGATE TO COUSERA.ORG IN ORDER TO USE THE EXTENSION

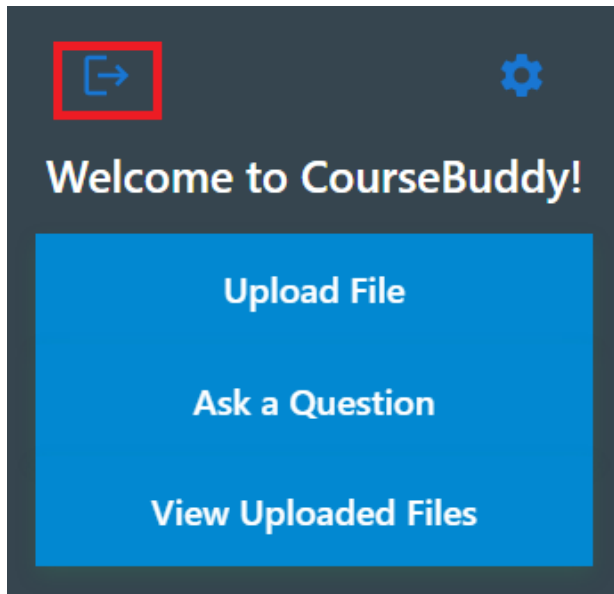
2.1. How to Sign-up/Login to use CourseBuddy

1. If you're a first-time user, please click on the extension to see the sign up button to make an account. A popup window will appear where you can enter your email and a password. You will be prompted to enter your password again to confirm before submitting.

The image displays two screenshots of the CourseBuddy interface. The left screenshot shows the CourseBuddy extension menu with a 'SIGN UP' button highlighted by a red border. The right screenshot shows the 'CourseBuddy Sign Up' popup window, which contains the following fields and buttons:

- Sign Up** (Title)
- Email Address *** (Text input field containing 'demo@example.com')
- Password *** (Text input field with masked characters '.....')
- Confirm Password *** (Text input field with masked characters '.....')
- SIGN UP** (Blue button at the bottom, highlighted with a red border)

2. After signing up, you will be directly signed in with those credentials you used to sign-up (no email confirmation required).
3. You can logout by clicking the arrow icon on top-left of the extension menu.

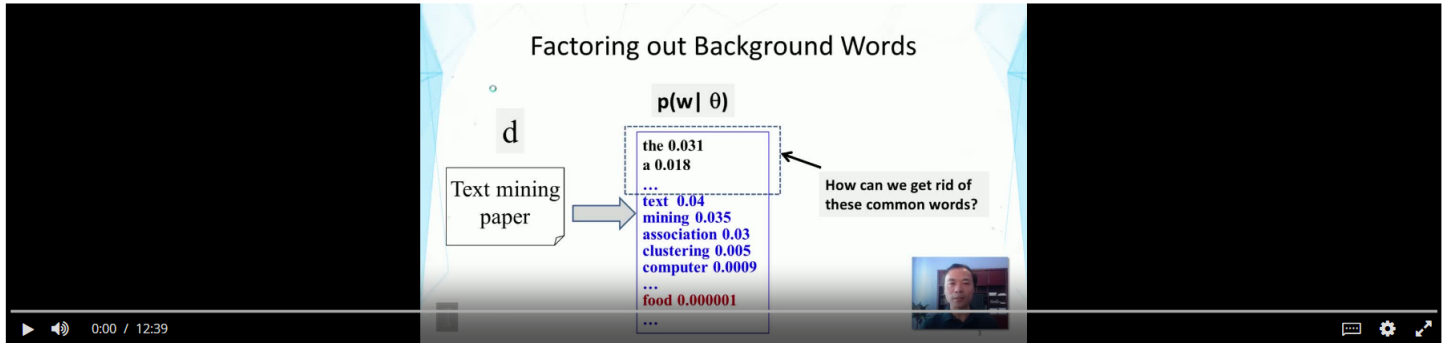


4. You can log back in again by clicking on the extension drop-down and entering the email address and password you signed up with then clicking the log in button.

A light-themed login and sign-up form for CourseBuddy. The title "CourseBuddy" is centered at the top. Below it are two input fields: "Email Address *" containing "demo@example.com" and "Password *" containing seven dots. At the bottom, there are two blue buttons: "SIGN IN" (highlighted with a red border) and "SIGN UP".

2.2. How to Generate a Summary for a Lecture Video

- While on a page of coursera that contains a video lecture, click the 'Generate Summary' button and an embedded summary will appear on the page.



9.1 Probabilistic Topic Models: Mixture of Unigram Language Models

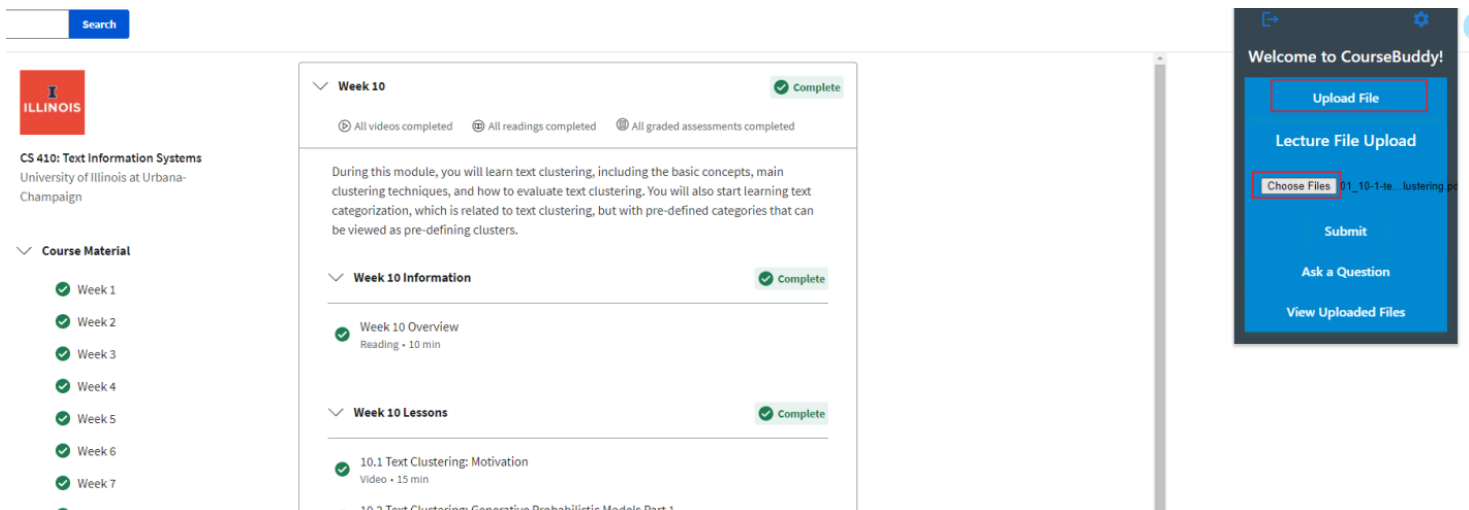
[Save note](#)

[Generate Summary](#)

- Text discusses the concept of mixture of unigram language models in probabilistic topic models.
- Problem addressed is the presence of frequent background words that skew maximum likelihood estimation.
- Solution proposed is to use a background topic model to account for common words.
- Word generation involves flipping a coin to decide which distribution to use.
- Probability of observing a word from mixture model is sum of probabilities of selecting each component model.
- Parameters of the model, including word distributions and topic coverage, can be estimated using data.
- Likelihood function is similar to previous model, but with a sum instead of one distribution.
- Maximum likelihood estimator is used to find parameters that maximize likelihood function.
- Estimation is subject to constraints.
- Mixture models are a general form for handling this problem.
- Mixture models help address the issue of frequent background words in data.
- Background topic model helps account for common words in the mixture model.

2.3. How to Upload Lecture Transcripts/Slides

- Select 'Upload File' and from there you can upload a .txt or .pdf file



2.4. How to View Generated Summaries

- Select a file from the uploaded file list and a pop up will load the summary for that lecture.

The screenshot displays the CourseBuddy web application. On the left, the 'Course Material' sidebar lists weeks 1 through 9, with Week 10 selected. The main content area shows 'Week 10' information, including a 'Week 10 Overview' reading and 'Week 10 Lessons' with video links. A 'CourseBuddy Summary' pop-up window is open, displaying a list of bullet points about text clustering. On the right, a sidebar contains links for 'Upload File', 'Ask a Question', and 'View Uploaded Files', with the latter highlighted by a red box.

2.5. How to Ask the Chatbot Questions

- Select 'Ask a Question' that will cause a pop up to appear.
- This pop up is now the chatbox, type in a question and press enter or click the 'send' button. Then your question will be answered with a source citing the specific lecture the answer was derived from. Please note it can take some time for a response to be generated, so please be patient.

The screenshot shows the CourseBuddy interface with the 'Ask a Question' button highlighted in the right sidebar. A 'CourseBuddy AI Chatbox' pop-up is open, displaying a greeting and a sample question 'What is text clustering?'. The chatbox shows a detailed answer about text clustering techniques and their application in data mining, citing a specific source: '10.1 - Text Clustering Motivation (01_10-1-text-clustering-motivation.en.txt)'. The background shows the same course material sidebar and main content area as in the previous screenshot.

3. Software Testing Instructions

This portion of document is intended for TAs and peer reviewers

Prerequisite:

1. For testing, please login to CourseBuddyAI extension using the following credentials

Email: demo@example.com

Password: Demo123!

3.1. Test Summarization

1. Navigate to the the following lecture video: titled “9.1 Probabilistic Topic Models: Mixture of Unigram Language Models”
<https://www.coursera.org/learn/cs-410/lecture/EbbsO/9-1-probabilistic-topic-models-mixture-of-unigram-language-models>
2. Click on the “Generate Summary” button, should expect to see summary text appear under the video.

3.2. Test Question Answering

1. Open the CourseBuddyAI chatbot and try asking one of the following questions:

What is text clustering ?

What is the vector space retrieval model?

When does browsing tend to be more useful?

2. Should expect to see answers with lecture sources.

3.3. Test File Upload

1. Try downloading the following file then uploading it through the File Upload dropdown.
https://nyc3.digitaloceanspaces.com/coursebuddy/cs410/transcripts/01_10-1-text-clustering-motivation.en.txt
2. After uploading it, go to “View Uploaded Files”
3. You should see the file and the generated summary when clicked on