

Project Proposal

Web Summarizer and Shortener

COSC 4P02
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Introduction

Significance:

This project aims to address the challenges users face in accessing relevant information efficiently in the digital age. Navigating through the vast amount of information available online without efficient technologies that provide concise summaries makes information retrieval a daunting task. To simplify access to information, the proposed tool aims to generate shorter URLs for easy sharing and provide succinct and insightful content summaries while employing LLMs or NLP, thus hoping to contribute to a more streamlined and user-friendly digital experience.

Problem:

When looking for quick access to relevant material in the age of technology, people may find it overwhelming due to the huge amount of information available online. Long URLs are difficult to navigate, and the lack of concise summaries may make it more difficult to understand information properly. It is obvious that, to improve user experience and make information retrieval simpler, a tool that can create concise summaries and shorten URLs will be required.

Objective:

The objective is to create a program where the input would be a YouTube video or a webpage URL and the output would include a shorter URL for simple sharing. Additionally, the tool will make use of Large Language Models (LLMs) or Natural Language Processing (NLP) to provide short and insightful summaries of web content. In addition to the application's free features, additional premium features would be made available, including a user dashboard, social media integration, API access, and custom summarization levels.

Project Description

The Web Summarizer and Shortener project is a comprehensive approach created to tackle the difficulties presented by the vast amount of content available online. The project includes two core functionalities; summarization of both text and video content, and URL shortening of the respective source content. It includes several premium features that offer a more personalized and enhanced user experience. The Web Summarizer and Shortener project has the potential to completely change the way people engage with online content. It makes information sharing and consumption easier by integrating summarizing and URL-shortening features.

Software engineering process and technical tools

We will be using the Scrum approach for this project. Because the Scrum method is iterative and allows for frequent product increments, it is advantageous to use it when developing the tool. The framework promotes team member collaboration, responsiveness to changes, and

customer input. The tool's success is influenced by releasing the product incrementally, adopting technology with flexibility, and prioritizing additions according to their significance.

Each sprint would be 2 weeks consisting of 4 meetings and will be held during class time (Tuesdays and Fridays). Every 1st meeting of the sprint, based on the product backlog created, a **Sprint Planning** meeting would help create a sprint backlog. At the end of every sprint (the 4th and last meeting), **Sprint Retrospective and Review** meetings would be held to discuss what went well/wrong during the last sprint and how the next sprint can be improved. The choice of technical tools and the planned two-week sprints demonstrate a commitment to flexibility, adaptability, and continuous improvement throughout the development lifecycle.

GitHub page: <https://github.com/Attested-paper51/COSC-4P02-Web-Summarizer>

Meeting Schedule

Weekly meetings every Tuesday and Friday from 3:00 PM to 4:30 PM

- Daily scrum meetings to be simulated through communications on Discord (with the exception of in-person Scrums listed in the schedule)

Week Of	Goals for completion
Jan 8	<ul style="list-style-type: none">• Discuss deliverables, the project topic and meeting schedules• Create a GitHub page, discuss free and pro features, and timetable, review the doc and update as needed.
Jan 15	<ul style="list-style-type: none">• Upload all docs to Brightspace and GitHub.• Project Proposal due on Jan 16
Jan 22	<ul style="list-style-type: none">• Write down user stories and create a product backlog• Release Planning Review (with TA) on Jan 23• Release Planning document due on Jan 26• Sprint Planning Meeting on Jan 26• Begin the 1st Sprint development on Jan 26
Jan 29	<ul style="list-style-type: none">• In-person Scrum meetings on Jan 30 and Feb 2
Feb 5	<ul style="list-style-type: none">• In-person Scrum meeting on Feb 6• Sprint Review + Retrospective meeting on Feb 9• Have an improved plan for the next sprint• Sprint Planning Meeting on Feb 9• Begin the 2nd Sprint development on Feb 9
Feb 12	<ul style="list-style-type: none">• In-person Scrum meetings on Feb 13 and Feb 16
Feb 19	<ul style="list-style-type: none">• In-person Scrum meeting on Feb 20• Sprint Review + Retrospective meeting on Feb 23• Progress meeting (with TA) on Feb 23• Have an improved plan for the next sprint

	<ul style="list-style-type: none"> • Sprint Planning Meeting on Feb 23 • Begin the 3rd Sprint development on Feb 23
Feb 26	<ul style="list-style-type: none"> • In-person Scrum meetings on Feb 27 and Mar 1 • Test the first version of the web summarizer tool on Feb 27 • Release the first version • Progress Report 1 due on Feb 27
Mar 4	<ul style="list-style-type: none"> • In-person Scrum meeting on Mar 5 • Sprint Review + Retrospective meeting on Mar 8 • Have an improved plan for the next sprint • Sprint Planning Meeting on Mar 8 • Begin the 4th Sprint development on Mar 8
Mar 11	<ul style="list-style-type: none"> • In-person Scrum meetings on Mar 12 and Mar 15
Mar 18	<ul style="list-style-type: none"> • In-person Scrum meeting on Mar 19 • Progress meeting (with TA) on Mar 19 • Sprint Review + Retrospective meeting on Mar 22 • Have an improved plan for the next sprint • Progress Report 2 due on Mar 22 • Sprint Planning Meeting on Mar 22 • Begin the 5th Sprint development on Mar 22
Mar 25	<ul style="list-style-type: none"> • In-person Scrum meetings on Mar 26 and Mar 29
Apr 1	<ul style="list-style-type: none"> • In-person Scrum meeting on Apr 2 • Sprint Review + Retrospective meeting on Apr 5 • Have an improved plan for the next sprint • Sprint Planning Meeting on Apr 5 • Begin the 5th Sprint development on Apr 5
Apr 8	<ul style="list-style-type: none"> • In-person Scrum meetings on Apr 9 and Apr 12 • Prepare a how-to-use guide along with the presentation
Apr 15	<ul style="list-style-type: none"> • In-person Scrum meeting on Apr 16 • Sprint Review + Retrospective meeting on Apr 19 • Testing the final version • Release the product on Apr 23 • Final Report due between 15th and 28th • Final Demonstration/Presentation between 17th to 26th