Department of Computer Science
COSC 4P02 - Software Engineering II
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Project Proposal

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1 Objectives

1.1 Problems

In day-to-day life, staying updated with the real world is necessary. However, keeping up with the latest information and current technologies becomes challenging with limited time and busy schedules. The primary challenge is finding user-specific content from news sources, articles, blog posts, and social media platforms. With the overwhelming volume of online data and the limited time users have, searching for the exact content they need often becomes a hassle.

1.2 Importance

In today's fast-paced digital world, where time is limited, finding a well-crafted newsletter that generates personalized content and delivers it in an engaging, concise, and relevant format is highly valuable. Social media and online newsletters have become essential for staying informed about what's happening globally, from cryptocurrency and technological advancements to political awareness. Traditional TV is no longer the primary news source, particularly for the younger generation, who increasingly turn to platforms like Instagram and TikTok for updates. In this context, an AI-powered newsletter and social media content generator would be an excellent tool for staying informed about the world around us.

1.3 Objectives

Our goal is to develop a SaaS platform that enables users to generate personalized newsletters and social media content. By leveraging advanced AI techniques, we aim to automate content aggregation, summarization, and delivery, ensuring high relevance and platform compatibility. With these features and a robust platform design, our goal is to provide users with a user-friendly, reliable, and consistently available service.

1.4 Project Description

Our goal is to develop a user-friendly website that will have a user profile and dashboard. It will also enable users to input a list of news and social media sources, topics, keywords, locations, or industries to generate personalized newsletters and social media content using advanced AI techniques such as Natural Language Processing (NLP). The content will be formatted for various platforms, including email newsletters, Twitter posts, LinkedIn updates, and Instagram captions, ensuring both relevance and platform compatibility. Additionally, users will receive automated notifications at intervals they specify. Our platform aims to save time and provide users with highly relevant and tailored content by automating content aggregation, summarization, and delivery. Overall, we will develop software as a service that will provide users with a friendly environment to interact and receive personalized generated content in the proper format. We will also be able to share the news with other media platforms.

1.5 Software Engineering Process

For the "AI-Powered Newsletter and Social Media Content Generator," we're using the Agile-Scrum methodology to keep the development process organized and flexible. The first step will be developing the product backlog, consisting of the user stories list. Additionally, the backlog will be refined by breaking the larger stories into smaller ones and rephrasing the backlog items to increase clarity. Each sprint will focus on building specific features, and the scrum team will work to complete the tasks within the sprint. At the start of every sprint, we'll assign tasks based on user needs and make sure everyone knows their responsibilities. Regular meetings will help us share progress, solve problems, and keep things moving smoothly. At the end of each sprint, we'll look back on what worked and what didn't, so we can improve as we go. This will help us to determine the team's velocity, thus estimating the possible tasks to be done in the next sprint. Furthermore, this approach will allow us to tweak and enhance features whenever needed. After the sprint, feedback from stakeholders and customers will ensure the project is staying on track and meeting expectations. By breaking the work into smaller, focused steps, we'll stay efficient, collaborate effectively, and deliver a website that's both powerful and user-friendly.

1.6 Technical Tools

- **Version Control:** GitHub for collaboration and tracking changes
- **Product Backlog:** GitHub Issues
- **Frontend** HTML, CSS, JavaScript
- **Backend Framework:** Django, Python
- **Database:** PostgreSQL for data storage.
- **AI/ML Libraries:** OpenAI API or Hugging Face transformers for NLP (pre-trained models)
- **Deployment:** Docker for containerization and AWS for cloud hosting
- **Project Management:** GitHub Issues and Boards for task tracking

2 Tasks

2.1 GitHub Repository

GitHub Repo: GitHub Project Link

2.2 Timeline

Schedule	Goals
Jan 12	Project Proposal
Jan 13 - 18	Create product backlog, split into sprint backlog and release planning document
Jan 19	Plan Sprint 1
Jan 20 - Feb 2	Sprint Development
Feb 3 - 4	Sprint review
Feb 5 - 6	Plan Sprint 2
Feb 7 - 21	Sprint Development
Feb 22 - 23	Sprint review and retrospective meeting with Stakeholders & release first version
Feb 23	Plan Sprint 3
Feb 24 - Mar 9	Sprint Development & Integrate Testing & Fix Bugs
Mar 10	Sprint review
Mar 11	Plan Sprint 4
Mar 11 - 22	Sprint Development & Integrate Testing & Fix Bugs
Mar 22	Sprint review and retrospective meeting with Stakeholders & release second version
Mar 23	Plan Sprint 5
Mar 24 - April 7	Sprint development focusing on system testing, integration, bug fixing, deployment preparation
April 8	Sprint review and document writing
Before April 20	Finalize the product and present the final version

Table 1: Meeting Scheduling and Timetable

2.3 Recurring Meetings

- Every Friday at 4:00 PM to 5:00 PM

2.4 Team Members and Roles

Names	**Student ID**	**Roles**
Arifuzzaman	7088214	SCRUM Master / Developer
Kabir Sethi	6933782	Product Owner / Developer
Sahil Rashid	6954739	Developer
Hridoy Rahman	7340334	Developer
Jeffin Sam Joji	7344526	Developer
Yuanhan Huang	7642440	Developer

Table 2: Team members and roles