BBC Feed

A Novel Interface for News Consumption Inspired by Social Media

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Submitted in partial fulfilment of the requirements of Birmingham City University for the degree of Master of Science

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March 4, 2021- 1652 words

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How could social media delivery techniques be used in a digital news consumption platform to increase user engagement?

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2.1 Project Overview

This project aims to improve upon the flexibility and user engagement of traditional online news platforms, specifically those used by BBC News. The digital news landscape is changing rapidly, a report from Ofcom found that people in the UK are increasingly using digital platforms to consume news, often through the use of social media. This project proposes that adapting user interface techniques from social media and applying them to a news app would help to keep users on the news platform. The system created will also aim to be flexible so that it can adapt to future changes in the digital news world.

The project will be content-agnostic so that it can work with any future media that may be devised. To achieve this the project will be divided into three parts: the feed, the catalogue and the scrapers. The feed will be an app that users can interact with. It will need to intelligently select content from the catalogue and present it to the user for consumption. The catalogue will store content that can be displayed, this will aim to be fast to access, and well organised to ensure a smooth flow of content to the users. The scrapers will create the content for the catalogue by connecting to various BBC news data sources. They will read this content, translate it into a form suitable for the catalogue and store it. Each one will have to be custom made for the various content sources.

Social media often faces criticism for being addictive and of wasting users time [1]. This raises ethical considerations with this project as it has the potential to also create these same issues. This should be mediated by the lack of user created content, meaning that the users time will be spent browsing informative news rather than wasting it. Hopefully the addictive nature of social media will be reduced to the point that it is just engaging rather than a problem.

2.2 Key Terminology

Infinite scrolling: A user interface paradigm that presents content in a scrollable window. Before the end of the content is reached more content is loaded, resulting in the content appearing infinite to the user. This is often seen in social media, for example Facebook's newsfeed, and Twitter's timeline.

News Content: For the purposes of this study news content will be defined as text, audio, photos or videos that are created or distributed by a news agency. These can come from a variety of sources ranging from broadcast news programmes to stock photos used within an article.

2.3 Deliverables and Goals

The deliverables for this project will be the three components highlighted above, as well as all documentation require to understand, maintain, deploy and use the system. The documentation will be provided as HTML pages alongside documentation within the codebase. All code produced will be written in Python.

2.3.1 The Feed

This deliverable will be a Python Flask application that can either be run locally or deployed to a web server. It will have accompanying scripts that install any pre-requisites for running the application. This deliverable will depend on having a valid catalogue to read from. If the hosted catalogue is unavailable there will be options to read from a local version.

2.3.2 The Catalogue

This deliverable will take the form of an SQL database schema. The database that it describes will be hosted on an AWS RDS instance. As this may not be available at all times the feed will have the ability to deploy a local database to read from for testing purposes.

2.3.3 The Scrapers

This part of the project consists of several independent scripts, each will be tailored to a specific BBC data source. The specifics for language, running and hosting will vary between the scripts. They will each come with appropriate documentation.

2.4 Out of Scope Issues

This project is primarily focused on the engineering challenges of developing this system, as such it will not be attempting to measure user experiences in any way. The project will also not explore algorithms for choosing which content to display to users, it will however provide capacity for this functionality to be added at a later date. These topics are highly important to the problem space being explored, however they each could constitute a project in their own right and would spread the focus of this project too thin. These two issues would make for excellent follow up projects however so some comments may be made where relevant to future research.

3 Background and Rationale

3.1 Overview of the Problem Space

Modern news consumption started with the newspaper. Despite moving to online platforms these roots can still be seen in the user interfaces of digital news platforms such as the BBC News website and mobile app. These interfaces broadly function by providing categories of content to browse, this makes these interfaces good for researching topics and for getting an overview of recent news within a topic [1]. Social media instead often delivers content to users through an infinitely scrolling feed. This style of interface fits well with short bursts of interaction, such as while waiting for a kettle to boil or waiting for a bus. In these scenarios users often want to consume content without having to choose a category or risk running out of content.

This style of interface removes the need for the end user to decide what content they consume at the point of consumption, instead they control what content is presented to them by following, liking, subscribing to or otherwise choosing to receive content from a number of sources. From this user input a social media platform will choose exactly which content to provide to a user, and in which order. The specifics of how these decisions are made are closely guarded secrets, and as such will not be investigated here.

While social media allows users to access news content in this way, it is often preferential to deliver news to users on a first party platform, such as the app or website of the news agency. This gives the producers of the content more control over how it is presented and consumed, as well as what other content may be presented to the user alongside the current content. This project aims to create an interface inspired by social media, but completely controlled by the news agency.

This also gives the creators of this content more flexibility to experiment with new content types, they are not limited to the narrow selection of media that the various social platforms offer. This feed can also offer features such as A/B testing that would enable the content producers to test the effectiveness of new media types.

When creating printed media, such as a newspaper, each article or photograph that is included takes up space that could have been used for something else. Because of this it is key to only select content that will have the greatest impact, and testing new content is risky. In an infinite scrolling style of interface however there is no limit on the amount of content that can be shown to a user, as such inserting new media forms to test them becomes more viable as if the user is not interested they can scroll past and move on to the next piece of content.

3.2 Motivation for the Project

This last issue is the primary inspiration for this project. As part of the BBC News Labs team I worked on the SlicerAV and Live Segment Notifications (LSN) projects. SlicerAV takes broadcast news programmes and automati-

cally breaks them up into ”slices” of short form media. Once this project was functional the next question was how to deliver this content to end users. For testing purposes we decided to tweet the slices as we felt that they fit best on to a social media platform, and twitter worked best for our use-case.

The LSN project aimed to inspect news broadcasts just before they go live and notify users about upcoming content that may be interesting to them. This worked well, however we didn’t have a good platform for hosting this content internally. This raised to possibility of a feed that would hold all the slices that a user had been notified about for them to browse. We then took that idea and realised it might fit well if applied to a news homepage, where sliced content could be surfaced alongside regular articles and videos.

News Labs is focused on innovating news production and consumption, as such they have several projects that could benefit from a flexible user interface to surface their content. One such project is Graphical Story Telling (GST) which aims to take articles and turn them into a series of graphics with overlaid text that can be swiped through. This content is inspired by social media and would fit perfectly into this project. This provided the idea to make a flexible feed that can present a wide variety of content in one place, with functionality for personalisation and testing.

4 Literature Review

4.1 Interfaces for Online News Consumption

4.2 Infinite Scrolling User Interfaces

4.3 Social Media Design for Increasing User Engagement

5 Methodology

5.1 Development Methodology

The development of this project will follow a Kanban-style methodology [2]. Since there is only one developer on this project this will not be used for collaborative purposes, instead it will be used to manage and monitor tasks. As tasks arise they will be added to a To-Do list. These will me moved to an In Progress list when they are started and then a Done list when finished. Tasks will be added, edited and split into subtasks as needed throughout the project.

This methodology will allow a high degree of flexibility which fits the project well as the specifics of the project will likely evolve as the project progresses.

6 Project Timeline

References

[1] dummy. dummy, dummy.

[2] Kanbanize. What is kanban? explained in 10 minutes: Kanbanize.