

Final Report

Project Title: Post Pioneer

Course: COSC 4P02

Date: April 27, 2025

Group Number: 8

Group Members:

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Introduction

The project is a SaaS web application, utilizing JavaScript/HTML/REACT/Flask and Python, that allows users to create personalized social media posts.

The software enables users to streamline content generation by leveraging AI to produce relevant content and generate images and text.

The user can customize content for different platforms—for instance, Twitter or LinkedIn.

Users can set the frequency of the post generation bot, choosing between daily, weekly or monthly. The application will provide a centralized dashboard that provides analytical insights.

System Architecture

- Frontend
 - **React.js** – Component-based UI development
 - **Tailwind CSS** - For styling UI Components
 - **Material UI (MUI)** – Modern, responsive UI components
 - **Recharts** – Data visualization (engagement graphs)
 - Backend
 - **Flask (Python)** – Lightweight API for post generation logic
 - **Deepseek (Ollama) and Stable Diffusion (Diffusers)** – AI-driven content generation
 - **Firestore Authentication** - User Authentication
 - **Firestore Realtime Database** – JSON-based NoSQL database for storing user inputs, posts, and settings
 - Integration
 - **RESTful API (Flask ↔ React)** – Smooth communication between backend and frontend
 - **Firestore SDK** – Authentication and Realtime DB connection
 - **Custom Scheduling Logic** – To manage post frequency (daily/weekly/monthly)
-

Swe Processes + Design and implementation

Agile Methodology in Our Project

- Agile Framework
 - Adopted **Scrum** to enable iterative development and continuous improvement
- Sprint Structure
 - Followed a **2-week cycle**
 - Included **sprint planning, sprint reviews** and **retrospective** to align on goals, review progress, and reflect on improvements
- Team Collaboration
 - Initially conducted daily standups, which evolved into weekly **check-ins** and were later integrated into main team biweekly team meetings
 - Practiced **Pair Programming** to enhance code quality and knowledge sharing amongst team members

Agile Methodology in Our Project

- Task/workflow management
 - Used **JIRA** to manage user stories, track tasks, and monitor sprint progress
 - Each User Story was broken down into actionable tasks ("taskified")
- Version Control
 - Codebase has been hosted on **GitHub**
- Feedback Loop
 - Agile allowed regular meetings with stakeholders (TA and Professor) for **continuous feedback** and **iterative refinement** of the project.
- Documentation
 - Maintained **internal documentation** for development clarity
 - Provided user installation guides in the GitHub **README** for ease of use

Link to Jira : [4P02 Scrum Project](#)

| | | | | | | | | | | | | | |
|--------------------------|---|--|----------|--|------|--|-------------|--|----------------|--|----------------------|--|--|
| <input type="checkbox"/> | > | | SCRUM-32 | As a user, I want to be able to decide what platform I want post my content on so I can hav... | DONE | | Add comment | | SCRUM Sprint 5 | | Shihab Khateeb | | |
| <input type="checkbox"/> | > | | SCRUM-2 | As a user, I want to have ability to choose the basic or pro version so that I am on the plan t... | DONE | | Add comment | | SCRUM Sprint 5 | | Karan Arora | | |
| <input type="checkbox"/> | > | | SCRUM-12 | As a user, I want to cancel my payment plan so that I do not lose any extra money | DONE | | Add comment | | SCRUM Sprint 5 | | Karan Arora | | |
| <input type="checkbox"/> | > | | SCRUM-4 | As a user, I want to be able to select topics that I am interested in to generate posts about, ... | DONE | | Add comment | | SCRUM Sprint 5 | | Ritika Chaudhary | | |
| <input type="checkbox"/> | > | | SCRUM-5 | As a user, I want to be able to see analysis for how generated posts perform, so that I can u... | DONE | | Add comment | | SCRUM Sprint 5 | | Will Yochim | | |
| <input type="checkbox"/> | > | | SCRUM-3 | As a user, I want to store my payment details securely so that I do not worry about any sec... | DONE | | Add comment | | SCRUM Sprint 5 | | Karan Arora | | |
| <input type="checkbox"/> | > | | SCRUM-33 | As a user, I want to have the ability to input specific websites I want to scrape so I can gath... | DONE | | Add comment | | SCRUM Sprint 5 | | Ritika Chaudhary | | |
| <input type="checkbox"/> | > | | SCRUM-70 | As a user, I want to be able to generate short, platform-specific video content, so that I can ... | DONE | | Add comment | | SCRUM Sprint 5 | | Keeler onethreefv... | | |
| <input type="checkbox"/> | > | | SCRUM-39 | As a user, I want to be able to choose between adding my own hashtags, vs having AI gene... | DONE | | Add comment | | SCRUM Sprint 5 | | Keeler onethreefv... | | |
| <input type="checkbox"/> | > | | SCRUM-38 | As a user, I want to review my posting prior to them being posted so I can make sure I am p... | DONE | | Add comment | | SCRUM Sprint 5 | | Nadine Hoda | | |
| <input type="checkbox"/> | > | | SCRUM-98 | As a user, I want to be able to view and store previously stored inputs so I can view them lat... | DONE | | Add comment | | SCRUM Sprint 6 | | Will Yochim | | |
| <input type="checkbox"/> | > | | SCRUM-6 | As a user, I want to be able to pick my payment plan so that I am paying the best rate accor... | DONE | | Add comment | | SCRUM Sprint 6 | | Karan Arora | | |
| <input type="checkbox"/> | > | | SCRUM-10 | As a user, I want to be able to update my scheduling plan so that I can alter it depending on... | DONE | | Add comment | | SCRUM Sprint 6 | | Keeler onethreefv... | | |
| <input type="checkbox"/> | > | | SCRUM-9 | As a user, I want to be able to cancel my scheduling plan so that I am not posting when I d... | DONE | | Add comment | | SCRUM Sprint 6 | | Keeler onethreefv... | | |
| <input type="checkbox"/> | > | | SCRUM-8 | As a user, I want to be able to pause my scheduling plan so that I can adjust according to c... | DONE | | Add comment | | SCRUM Sprint 6 | | Keeler onethreefv... | | |

Link to Github : [rc21mj/COSC4P02](https://github.com/rc21mj/COSC4P02)

Design and Implementation

Architectural Patterns

- **Producer-Consumer Pattern:**
 - Utilized for handling scheduled posts — the **Producer** creates scheduled content, which is then processed and displayed by the **Consumer (Dashboard)**.
- **Client-server Architecture**
 - Used to separate concerns — the **Client** handles the user interface and interactions, while the **Server** manages logic, data, and API communication.
- **Version Control**
 - **Git** was used for source control, with **GitHub** as the remote repository to enable collaboration, branching, and pull requests.
- **Licensing**
 - The project is open-source and released under the GNU General Public License v3.0

Features

- Account creation
- Social media account linking
- Post generation
- With image generation
- With uploaded image
- Post analytics dashboard
- Post editing functionality
- Post generator deletion functionality

Requirements Document

Instructions To Run

- Install Ollama
- 'pip install ollama'
- 'pip install diffusers'
- 'pip install torch'
- 'pip install transformers'
- 'ollama serve'
- Install DeepSeek (currently using 1.5b)
 - Before your first run use the command: `ollama run deepseek-r1:1.5b`
 - For other versions change the postfix in the commandline (currently 1.5b) and change the model field to that model in Save.py
 - For running timyllama, use command 'ollama run tinyllama'
- To run the front end, open your command line and navigate to `PostPioneer/frontend`
 - Have `npm` installed
 - Run `npm install react-scripts` and `npm install firebaseui`
 - Run `npm start`
- To run the back end, open your command line and navigate to `PostPioneer/4p02 testing/postpioneer`
 - Have `Python` and `pip` installed
 - Run `pip install firebase-admin`, and `pip install ollama`
 - Run `py mergedApp.py`

User Manual & Technical Manual/Internal Documentation

Getting Started

PostPioneer is designed to simplify your social media content creation process. Follow these steps to get started:

1. **Sign Up:** Create an account to access basic features of PostPioneer.
2. **Connect Your Social Media:** Link your social media accounts to allow PostPioneer to post on your behalf.
3. **Generate Content:** Use our content generator to create engaging posts tailored to your audience.
4. **Review and Edit:** Review the generated content and make any necessary edits before posting.
5. **Schedule or Post:** Choose to post immediately or schedule your content for a later time.

With PostPioneer, creating and managing your social media content has never been easier!

Internal Documentation

<https://github.com/rc21mj/COSC4P02/blob/main/Internal%20Documentation.pdf>

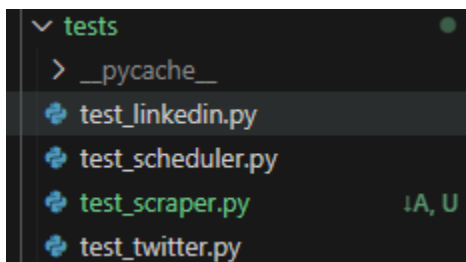
Testing

Automated Testing

- Automated testing was performed on functional requirements using the pytest library
- Focused upon testing basic functionality using mock data
- Aim to cover the parts of the code that interact with social media APIs, i.e. Twitter, LinkedIn, as well as the code responsible for interacting with Firebase db for scheduling.
- Tests are located within COSC4P02/PostPioneer/backend/tests

Manual testing

- Manual testing for functional requirements was done
- A document that details all manual test cases recorded (see below table)
- Test Description, Precondition, Test steps, Expected Results, Pass/Fail
- Manual testing for the front-end was carried out here as well. (For instance, login and register functionality)
- Testing was done by Developers of the team and third party testers
- Manual testing was done quite often
- Tested some Edge Cases as well
- Non-Functional testing was out of the scope of our testing as things like Availability and Reliability testing took too much scale to test



```

plugins: anyio-4.9.0, cov-6.1.1
collected 27 items

tests\test_linkedin.py .....
tests\test_scheduler.py .....
tests\test_scraper.py .....
tests\test_twitter.py .....

===== tests coverage =====
coverage: platform win32, python 3.13.2-final-0

Name      Stmts  Miss  Cover
-----
mergedApp.py    292    66    77%
TOTAL          292    66    77%

```

```

===== tests coverage =====
coverage: platform win32, python 3.13.2-final-0

Name      Stmts  Miss  Cover
-----
webScraper.py   78     5    94%
TOTAL          78     5    94%

```

| Test Description | Preconditions | Test Steps | Expected Result | Pass/Fail | Comments |
|--|-------------------|--------------------------------------|---|-----------|----------|
| Verify Home button navigates to homepage | N/A | Click the Home button in the navbar | User is redirected to homepage | Pass | |
| Verify Dashboard navigation | N/A | Click the Dashboard button | Dashboard page loads | Pass | |
| Verify Generate a Post page loads | User is logged in | Click on the Generate a Post! button | User is redirected to form to generate a post | Pass | |
| Verify Payment Plan page loads | User is logged in | Click the Payment Plan button | User is redirected to payment plan page | Pass | |
| Verify Settings page loads | User is logged in | Click the Settings button | User is redirected to | Pass | |

| | | | | | |
|--|-----------------------|-------------------------------------|---|------|--------------------------|
| | | | Settings page | | |
| Verify Sign out button logs user out | User is logged in | Click on Sign out | User is redirected to home page and session is cleared | Pass | Login session is cleared |
| Verify User Login button navigates to login screen | User is logged out | Click on User Login | User is redirected to the login page | Pass | |
| Check responsive layout on smaller screens | Device width < 768px | Resize browser window | Layout stays clean and items on web app adjust accordingly | Pass | |
| UI consistency for navbar on all pages | User is on any page | Observe navbar layout and style | Navbar is present, buttons are spaced evenly, contrast is good, hover states work | Pass | |
| Submit login with empty email | User is on login page | Click "NEXT" with empty email field | Error message shown: "Enter your email address to continue" | Pass | |

| | | | | | |
|---|--|--|---|------|---|
| Submit login with invalid email format | User is on login page | Enter invalidemail and click "NEXT" | Error message shown: "That email address isn't correct" | Pass | |
| Submit login with valid unregistered email and valid password | User is on login page Email not in Firebase | 1. Enter valid@example.com, click NEXT 2. Write password like test123, click SAVE | Create account workflow is entered and then user is navigated to homepage | Pass | User is added to firebase and user is signed in |
| Submit login with valid unregistered email and invalid password | User is on login page Email not in Firebase | 1. Enter valid1@example.com, click NEXT 2. Write password like test1, click SAVE | Error is shown "Strong passwords have at least 6 characters and a mix of letters and numbers" | Pass | |
| Submit with valid registered email and valid password | User is on login page Login details in Firebase | 1. Enter valid@example.com, click NEXT 2. Write password test123, click SIGN IN | Sign in workflow is entered and user is navigated to homepage | Pass | User is signed in |
| Submit with valid registered email and invalid password | User is on login page Login details in Firebase | 1. Enter valid@example.com, click NEXT 2. Write password test1234, | Error is shown "The email and password you entered" | Pass | |

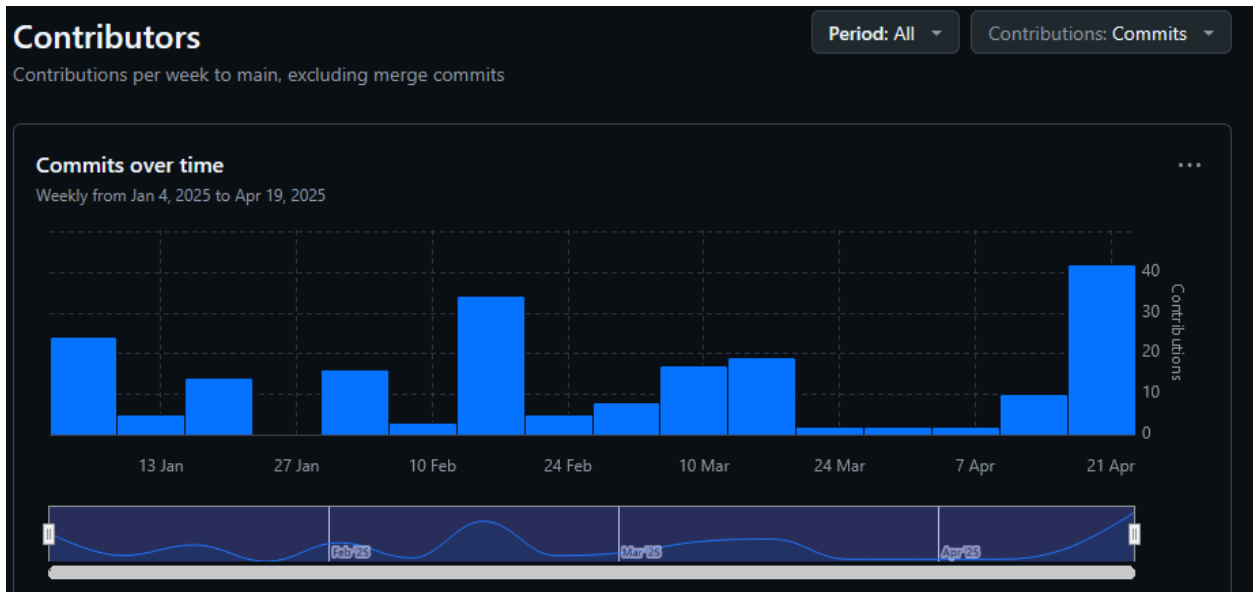
| | | | | | |
|----------------------------------|--|--|--|------|---|
| | | click SIGN IN | don't match" | | |
| Submit valid support message | User is on Support page | 1. Enter a topic in "Your Topic" 2. Enter a valid email in "Your Email" 3. Type a message 4. Click SEND MESSAGE | User is redirected to https://forums.submit.co/form/submit with a link back to the main website | Pass | An email should be received at the support email address, in this case rockheadrush@gmail.com |
| Submit with invalid email format | User is on Support page | Enter text like test@ in "Your Email" field and click SEND MESSAGE | Error shown for invalid email input | Pass | |
| Submit with empty fields | User is on Support page | Click SEND MESSAGE with all fields empty | Error shown for empty fields | Pass | |
| Submit a generate post | User is logged in User is on Generate a Post page | Click generate post with any fields (preferably default) | A post is generated and the user is redirected to the edit posting page | Pass | |
| Submit an edited post | User is logged in User has generated a post | Click submit a post | The user is redirected to the home page | Pass | A post is now added to the specified platform |

| | | | | | |
|--|---|---|---|------|--|
| Scheduler generates post | Hourly scheduled post is in database | 1. Open backend 2. Wait for scheduler trigger 3. Check console logs | Post generation should trigger automatically | Pass | |
| Press Delete Account button | User is logged in User is on Settings page | Click the DELETE ACCOUNT button | User should be logged out | Pass | The user account is removed from Firebase |
| Press the Sign Out button on the settings page | User is logged in User is on Settings page | Click the sign out button | User should be logged out | Pass | |
| Press the Add LinkedIn button | User is logged in User is on Settings page | 1. Click the Add LinkedIn button 2. Proceed through LinkedIn proprietary authorization flow 3. Submit | User should be redirected back to Settings page | Pass | LinkedIn credentials are added in database |
| Press the Remove LinkedIn Button | User is logged in User is on Settings page | Click the Remove LinkedIn button | User should be redirected back to Settings page | Pass | LinkedIn credentials are removed from database |
| Press the Add Twitter Button | User is logged in User is on Settings page | 1. Click the Add Twitter button 2. Proceed through LinkedIn Twitter authorization flow 3. Submit | User should be redirected back to Settings page | Pass | Twitter credentials are added in database |

| | | | | | |
|--|---|---|--|------|---|
| Press the Remove Twitter button | User is logged in User is on Settings page | Click the Remove Twitter button | User should be redirected back to Settings page | Pass | Twitter credentials are removed from database |
| Generate Post without an Image | User is logged in and User is on the Generate a post page | 1. Fill out the entire post form 2. Select "None" for add image 3. Click submit | Users should not see an image in the edit post form. | Pass | An image is not generated or used if not requested. |
| Generate Post with an Uploaded Image | User is logged in and User is on the Generate a post page | 1. Fill out the entire post form 2. Select "Upload" for add image 3. Upload an image 4. Click submit | Users should be able to upload an image and see that uploaded image on the edit post form. | Pass | The uploaded image is displayed and can be posted. |
| Generate Post with a generated Image | User is logged in and User is on the Generate a post page | 1. Fill out the entire post form 2. Select "Generate" for add image 4. Click submit | Users should see the generated image after some time in the edit post page | Pass | The image has been generated and can be posted. |
| Display weekly, daily and monthly engagement stats on user dashboard | User is logged in and User is on the Dashboard page | 1. Select daily, weekly and monthly on the graph. | Users should be able to see the difference in time frames. | Pass | The data is different for each timeframe. |

| | | | | | |
|-----------------------------|--|--|---|------|----------------------------------|
| Delete scheduled post | User is logged in and on the dashboard | 1. Find post to delete 2. Select delete button | Users should see the post disappear from the list | Pass | Delete function is working |
|-----------------------------|--|--|---|------|----------------------------------|

Each member's work + GitHub logs





Charmvir:

- Text Generation (Deepseek & Ollama to run locally)
- Image Generation (Stable Diffusion, tried other models but this was the most compatible)
- Scheduling (APScheduler with Flask)
- Authentication, Account deletion (Firebase)
- Support form (formsubmit.co)
- Firebase Setup (Authentication and Realtime Database)
- Initial Database Design, Database management & rewriting reads and writes to work with database instead of CSV (Firebase Realtime Database)
- Jira Management (Setting up sprints, moving stories)
- Internal Documentation (I worked with most core features so it made sense for me to write)
- Manual Test Cases (Primarily for functionality but also checked boundary values)
- Misc front-end (Described in further Detail on GitHub)
- Video Generation (not integrated in the final product as I could not test on my AMD hardware and needed NVIDIA)

Commits on Apr 24, 2025

Dashboard editing functionality implemented

- Ability to edit posts and then post the generated ones has been added

6d51369

cg20gl committed 3 days ago

Fixed Scheduler and Added Dashboard Features

- Logical error caused by a previous deleting whitespace caused a long debugging process but finally fixed it
- Added logic to frontend buttons to deal with backend endpoints

c466a13

cg20gl committed 3 days ago

Commits on Apr 23, 2025

Added backend for dashboard buttons

- Added backend to cancel scheduled post
- Added backend to change scheduled post

8cd83bf

cg20gl committed 4 days ago

Fixed scheduler to post to a static field

-Want each post generator to act as a producer that has each generated post overwritten when necessary, this was changed to work in backend

7c43ad5

cg20gl committed 4 days ago

Merge branch 'main' of <https://github.com/rc21mj/COSC4P02>

26ec883

cg20gl committed 4 days ago

Updated dashboard to read from backend

- Dashboard now reads post data from backend
- Added API endpoint for it there too

1f3590f

cg20gl committed 4 days ago

Readded team's Editposting and MakeAPost Changes

- Readded editposting and makeposting changes

2c97132

-Also fixed an error causing generation to fail

cg20gl committed 4 days ago

Re-added navbar changes, added support form fix

-As the title suggests, we lost old navbar changes, I reimplemented them while also fixing the support form

71876d1

cg20gl committed 4 days ago

Fixed UI routing to old generation page

- When readding old UI, routing was bugged, had to fix it.

83e218b

cg20gl committed 4 days ago

Fixed settings page not receiving requests error

- Backend was not receiving requests properly anymore so after some debugging changed port on backend

8825ac9


cg20gl committed 4 days ago

-0- Commits on Apr 18, 2025

Added image upload frontend, fixed form css


- Added custom image upload functionality on front-end, simple addition on backend to accept this
- Removed disparate font and background specific to this page

5d59223

 cg20gl committed last week

Changed Layout and Added Dashboard to Navbar

- Now the footer contains all secondary pages, reducing navbar clutter and making the footer a secondary navbar in a sense
- Feel free to change this if you don't like my layout

c533d80  cg20gl committed last week

Provided Internal Documentation

- So we can finish the project together I provided a knowledge transfer document, main project functionality knowledge is included
- This should be enough that anyone on the team can pickup and understand enough about the project to make meaningful additions

f034ce1 cg20gl committed last week


-0- Commits on Apr 10, 2025

Added sample dashboard page


- To get our work going on the dashboard I implemented a simple UI for what the dashboard could look like
- The analytics and post sections can be replaced with individual components that we implement in their own files and export them as components but this work in progress version should be a good proof-of-concept

adf06dc

 cg20gl committed 2 weeks ago

Added back-end dashboard scheduling placeholders 

- Designed so that the front-end team can call without needing to worry about the logic behind them
- When the front-end is implemented for the dashboard I can glean into the logic there and take care of this back-end
- Call these via a user input on each scheduled post where these functions will take care of the rest

7b07066  cg20gl committed 2 weeks ago

-0- Commits on Apr 3, 2025

Added Hashtags front end, fixed Edit Form

- Simple front-end fix to form for custom hashtags
- Fixed Data= in edit form
- Reverted DeepSeek to smaller version for testing purposes post demo as well as reverted to cpu based version

3ab8f2e   cg20gl committed 3 weeks ago

-0- Commits on Mar 23, 2025

Added a Video Generation Test File

I cannot run the video generation on my machine so I need someone to run this with me so I can debug this















8ed707a

cg20gl committed on Mar 23



Karan

- Helped with frontend Design and Development
- Created registration logic for the application
- Twitter Authorization (Saving of Twitter logins)
- Twitter Posting Logic
- Twitter Analytics Logic
- Basic vs Pro User Logic
- Payment Plan Logic (Google payment Integration)
- Aided in the database Setup
- Manual Testing
- Documentation




Commits on Apr 23, 2025

| | | | |
|---|---------|---|---|
| Refactor Twitter authentication and posting logic; add engagement metrics retrieval into Main Python File 6226120 committed 4 days ago | 436da38 |  |  |
| chore: ignore .DS_Store 6226120 committed 5 days ago | 729f10e |  |  |
| temp: WIP changes before pull 6226120 committed 5 days ago | b80ca7c |  |  |
| Ignore .DS_Store 6226120 committed 5 days ago | 490ee25 |  |  |
| Ignore .DS_Store 6226120 committed 5 days ago | 8d87b1f |  |  |
| X - Analytics logic Testing class implemented for engadment rate. Users are able to get the engadement rate for the last 7 days. 6226120 committed 5 days ago | 662d192 |  |  |
| Updated Dashboard to showcase analytics of each social media. (UI only) 6226120 committed 5 days ago | a50d7dc |  |  |









Commits on Apr 19, 2025

| | | | |
|--|---------|---|---|
| Prep Demo (support page UI) 6226120 committed last week | e4c8330 |  |  |
|--|---------|---|---|

Commits on Mar 19, 2025

| | | | |
|--|---------|--|--|
| Added sign up link on Login page 6226120 committed on Mar 19 | 984a5a9 |  |  |
| Demo Prep (UI Fixes) 6226120 committed on Mar 19 | bcab767 |  |  |

Commits on Mar 18, 2025






















| | | | |
|--|---------|---|---|
| Put google API backend in the mergeAPP.py 6226120 committed on Mar 18 | f011b95 |  |  |
| Implemented dialog box that showcases when canceling. 6226120 committed on Mar 18 | 3e278ee |  |  |
| Made it so when a user upgrades to the pro version, the UI updates and stores the user states. Also implemented a way for users to cancel their plan(which also updates in the database). 6226120 committed on Mar 18 | 3d72f9a |  |  |
| fixed google pay issues with code. 6226120 committed on Mar 18 | 6aba46b |  |  |















| | | | | |
|-------------------------|--|------------------|--|--|
| Commits on Mar 17, 2025 | Integrated payment plan page and sign out functionality in new UI. Also made it so when you are signed out you cannot see certain links such as "generating posts". 6226120 committed on Mar 17 | 48cc859 | | |
| Commits on Mar 16, 2025 | These are style changes to the front end 6226120 committed on Mar 16 | c8bc869 | | |
| | Fixed issues with UI for Home page and issues with login functionality 6226120 committed on Mar 16 | 18f9076 | | |
| | Created and integrated the header and footer component into each React page component 6226120 committed on Mar 16 | 15627b2 | | |
| Commits on Mar 3, 2025 | Merge branch 'main' of https://github.com/rc21mj/COSC4P02 6226120 committed on Mar 3 | 9bfb23b | | |
| | Updated and fixed bugs for account linking. Implemented posting capabilities for X. 6226120 committed on Mar 3 | 211522d | | |
| | Fixed bugs pertaining to integration of google pay and login token saving functionality 6226120 committed on Mar 3 | ee4e4c1 | | |
| Commits on Feb 27, 2025 | integrated files into react component to merge my work with the main UI 6226120 committed on Feb 27 | 9084d44 | | |
| Commits on Feb 20, 2025 | Add files via upload 6226120 authored on Feb 20 | Verified 49f8cf9 | | |
| Commits on Feb 18, 2025 | Add files via upload 6226120 authored on Feb 18 | Verified 6bb5b71 | | |
| Commits on Feb 17, 2025 | Add files via upload 6226120 authored on Feb 17 | Verified 569e16e | | |
| | Add files via upload 6226120 authored on Feb 17 | Verified d7335a1 | | |
| Commits on Jan 9, 2025 | Update README.md 6226120 authored on Jan 9 | Verified 8b3bb1d | | |

Nadine




- Frontend Design and development
- Refinement of home/landing page; A lot of refinement of this page as it was the central page that was constantly being updated so it was important to focus on making sure each update was uniform with the rest of the platform looks wise
- Making a uniform look across the platform
- Generate a post form
- Edit post form
- Documentation; Did regular updates after any major changes I made to the project, worked on structuring the progress reports and allocating parts of the write up to each team member to even out the contribution to the document

Commits






















| | | |
|---|---|--|
|  main |  Nadine-Hoda |  All time |
| Commits on Apr 24, 2025 | | |
| <div>Update mergedApp.py to add custom hashtags to our output</div> <div> Nadine-Hoda authored 4 days ago</div> <div>Verified4810231 <></div> | | |
| <div>Update MakeAPost.js to update form titles</div> <div> Nadine-Hoda authored 4 days ago</div> <div>Verified3e4f798 <></div> | | |
| Commits on Apr 20, 2025 | | |
| <div>Update Layout1.js matched style to other page, updated format and look</div> <div> Nadine-Hoda authored last week</div> <div>Verified4b3718d <></div> | | |
| <div>Update MakeAPost.js changed style, added new layout formats and backgrounds + buttons</div> <div> Nadine-Hoda authored last week</div> <div>Verified8ce7a85 <></div> | | |
| Commits on Apr 19, 2025 | | |
| <div>Update App.js</div> <div> Nadine-Hoda authored last week</div> <div>Verifiedb094aea <></div> | | |
| Commits on Mar 15, 2025 | | |
| <div>Update DeepseekSave.py to return postID</div> <div> Nadine-Hoda authored on Mar 15</div> <div>VerifiedeFaae59 <></div> | | |
| <div>Update TinyllamaSave.py to return post ID</div> <div> Nadine-Hoda authored on Mar 15</div> <div>Verifiede8c8ada <></div> | | |
| <div>Update PreferencesForm.js to redirect the generated post to editing</div> <div> Nadine-Hoda authored on Mar 15</div> <div>Verifiedcea4e98 <></div> | | |
| Commits on Feb 16, 2025 | | |
| <div>Merge pull request #3 from rc21mj/nh22dt</div> <div> Nadine-Hoda authored on Feb 16</div> <div>VerifiedccF484d <></div> | | |

| | |
|---|--|
| Merge pull request #3 from rc21mj/nh22dt   Nadine-Hoda authored on Feb 16 |  ccf484d  <> |
| created react frontend  Nadine-Hoda committed on Feb 16 | 9927749  <> |
| Merge pull request #2 from rc21mj/nh22dt   Nadine-Hoda authored on Feb 16 |  9ea22fa  <> |
| Testing  Nadine-Hoda committed on Feb 16 | 89de18e  <> |
| Updated README file  Nadine-Hoda committed on Feb 16 | c8247c5  <> |

Commits on Feb 3, 2025

| | |
|--|--|
| Update tone.go  Nadine-Hoda authored on Feb 3 |  cae9247  <> |
|--|--|

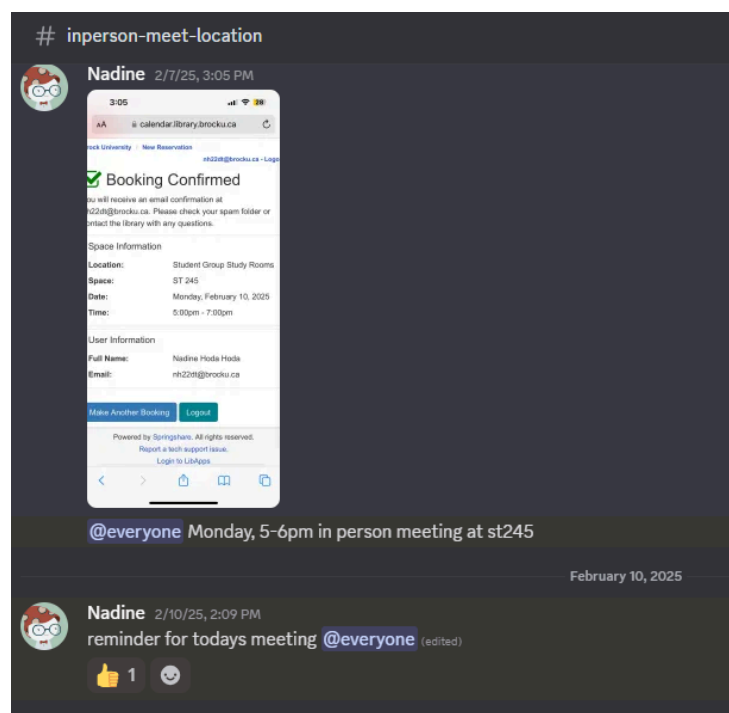
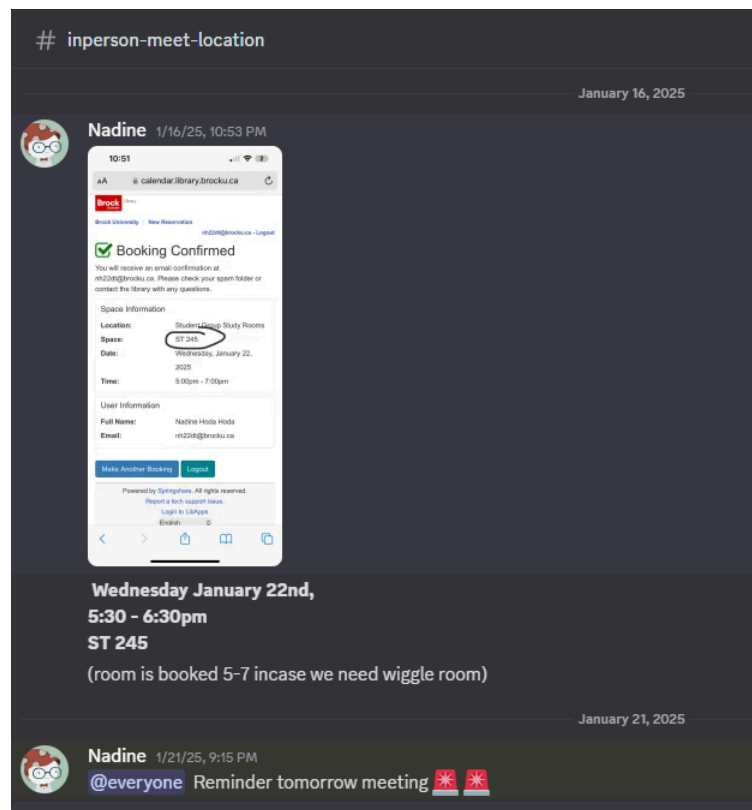
Commits on Jan 9, 2025

| | |
|---|--|
| Create Project Proposal  Nadine-Hoda authored on Jan 9 |  31f26b9  <> |
| Update README.md  Nadine-Hoda authored on Jan 9 |  e79b11b  <> |
| Update README.md  Nadine-Hoda authored on Jan 9 |  fb47234  <> |
| Create placeholder  Nadine-Hoda authored on Jan 9 |  b68229c  <> |
| Update README.md  Nadine-Hoda authored on Jan 9 |  e8f48f8  <> |
| Update README.md  Nadine-Hoda authored on Jan 9 |  cd45a31  <> |
| Update README.md  Nadine-Hoda authored on Jan 9 |  daa548f  <> |

Aside From implementation I took on a key role in team management and took on the following responsibilities to help with the teams organization and time management :

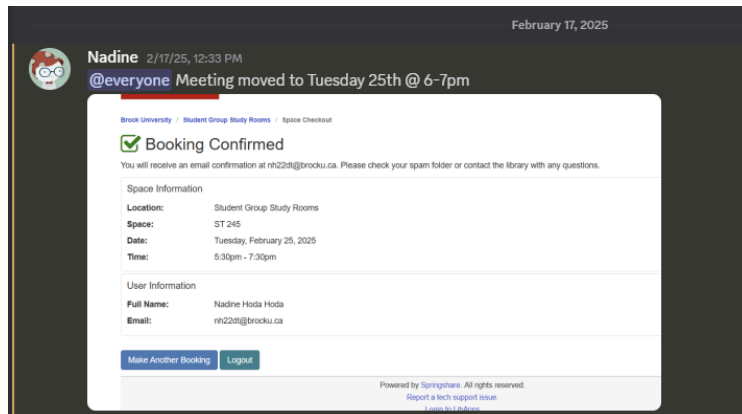
- Conducted meetings twice a week

Below is evidence of the channel I created to remind everyone of the team meetings that I took the initiative to book (time + location) and conduct

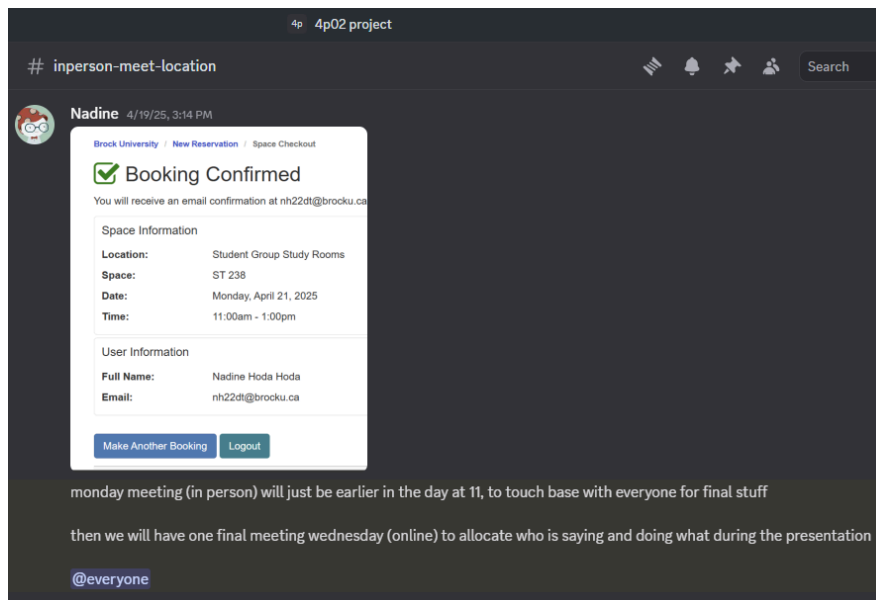


Also an example of me taking responsibility to move around the meetings and accommodate for when things came up; in this instance, meetings are usually conducted on Mondays, but because of midterms 3 group members had a midterm on

the monday so after asking everyone's schedule, I scheduled a meeting on Tuesday for this week only.




- Reviewed progress in each meeting +
- Set and adjusted goals for the team accordingly, see example below of last two points, I conducted an additional meeting where necessary



- To make sure goals that were being set in the meetings I conducted were being met I suggested the idea of a weekly stand up in our discord channel so we could watch each other progress

weekly-standup

 **Nadine** Today at 5:36 PM
Week of March 10th

Monday: In person meeting with team to discuss progress and upcoming tasks


Tuesday: Started Scrum 38, reviewing posts

Wednesday: Continued to work on scrum 38

Thursday: Made commits on scrum 38, online meeting with group to check in with everyone

Friday: Buddy system with Ritika, peer reviewed each other's work

H: None (edited)

 **Shihab** Today at 5:37 PM
Week of March 10th:


Monday: refined webscraper, added more to pool of sites

Tuesday: tried to implement cohesive UI design and integrate with back end

Thursday: team meeting, further ui design

Friday: ollama experimentation with deepseek

Saturday: further deepseek model testing

 **Ritika** Today at 5:41 PM
Week of March 10th


Monday: In person meeting with team for current progress report and upcoming tasks

Tuesday: Started on scrum 99, view and store posts

Wednesday: Researched bug fixes for problems ran into

Thursday: Online team meeting, discussed my progress and go teams input

Friday: Buddy system with Nadine, Peer reviewed each other's work and worked together to improve each other's work

 **Karan** Today at 5:42 PM
Week of March 10th


Monday: Meeting with the team to discuss progress.

Tuesday: Created and integrated layout component into each reach page.

Wednesday: I researched how react functionality works due to an error in the code from react.

Thursday: fixed UI for the home page, and updated issues with login functionality

Friday: Style changes in the css file, integrated the payment plan page into the react component, fixed sign-out functionality within the UI and etc.

 **Will** Today at 5:42 PM
Week of March 10th

Monday: Team meeting to check current progress, frontend developments


Tuesday: Continued to work on frontend implementation, adding more pages to the site

Wednesday: Edited setting page, adding linkedin token remove/add function

Thursday: Further configured linkedin token adding to frontend/backend

Friday: Successfully finished implementation and tested with various flows.

H: None

 **Charmvir2** Today at 5:50 PM
Week of March 10th:

Monday: Got a rough settings outline in the react frontend

Tuesday: Setup logic for translation

Wednesday: Test so limited time but looked into scheduling

Thursday: Test so limited time but looked into scheduling

Friday: Assignment so limited time but looked into fixing old flask frontend with our new react

Weekend: Finished scheduling logic and translating an existing post text body logic, also created a merged login and settings page logic file with the main app.

H: None (was a busy week for tests and assignments outside the class so I put extra time over the weekend to make up for it, will meet with team to push these changes to resolve potential conflicts first) (edited)

- Practicing the above structure I suggested to the team helped me see if anyone needed us to step in right away and call a meeting or if it could wait till the meeting day

- I was able to call meetings if anyone was struggling through this and helped to contribute to the team's management and success

Ritka

- Generate Post Form & Edit Post Form

I was responsible for building the Generate Post Form and Edit Post Form. These forms are central to the user experience, allowing users to easily create and customize AI-generated social media content.

- Backend logic for handling user preferences

I developed the backend functionality that handles user preferences—like tone, topic, and scheduling—and ensures those inputs are processed correctly for content generation.

- Interacted with Firebase Database to save and fetch user data/posts

I worked with Firebase, where I implemented features to save and retrieve user data and posts. This ensures a personalized experience and persistent data across sessions.

- Experimented with OpenAI and TinyLlama for generating text

I also experimented with OpenAI and TinyLlama models, tuning prompts and evaluating output quality to generate relevant, engaging, and varied content for different platforms. Later, we ended up scratching these models in favor of deepseek.

- Documentation

To support team collaboration and future maintenance, I helped write technical documentation, including setup instructions, project proposal, progress reports, etc.

- GitHub Repository Creation and Management

Lastly, I created and managed our GitHub repository. I set up the project structure, managed branches and pull requests, and ensured smooth collaboration through version control and issue tracking.

| | | |
|---|----------|----------|
| main | rc21mj | All time |
| Commits on Apr 23, 2025 | | |
| Update mergedApp.py to save scheduled post to database | Verified | ba72f7a |
| rc21mj authored 4 days ago | | |
| Update mergedApp.py to save posts to database | Verified | 539cef4 |
| rc21mj authored 4 days ago | | |
| Commits on Apr 22, 2025 | | |
| Update mergedApp.py to fix indentation error | Verified | 22ce419 |
| rc21mj authored 5 days ago | | |
| Update mergedApp.py | Verified | 66f17e0 |
| rc21mj authored 5 days ago | | |
| Commits on Apr 20, 2025 | | |
| Update Home.js to change frontend look | Verified | 03ba88a |
| rc21mj authored last week | | |
| Updated frontend functionality | Verified | 31fa110 |
| rc21mj authored last week | | |
| Commits on Apr 19, 2025 | | |
| Update MakeAPost.js to create animated dots indication a post is generating | Verified | 1f3b965 |
| rc21mj authored last week | | |
| Update README.md to inform how to run tinnyllama | Verified | bbfe108 |
| rc21mj authored last week | | |
| Update README.md to write how to start ollama server | Verified | 4ed1fe2 |
| rc21mj authored last week | | |
| Update and rename PreferencesForm.js to MakeAPost.js | Verified | b6ad79f |
| rc21mj authored last week | | |
| Update PreferencesForm.js to include drop down option for topic | Verified | 2f1bd3b |
| rc21mj authored last week | | |

Commits on Mar 18, 2025

| | | | | |
|--|----------|---------|--|--|
| Update PreferencesForm.js to allow user to edit their post rc21mj authored on Mar 18 | Verified | 4bbfd89 | | |
| Update EditPosting.js to allow user to edit their post rc21mj authored on Mar 18 | Verified | d24eb07 | | |
| Update App.js to call EditPost.js rc21mj authored on Mar 18 | Verified | dfb22a5 | | |

Commits on Mar 15, 2025

| | | | | |
|--|----------|---------|--|--|
| Create TinyllamaSave.py doing web scraping using tinyllama rc21mj authored on Mar 15 | Verified | a39dd24 | | |
| Rename Save.py to DeepseekSave.py rc21mj authored on Mar 15 | Verified | 226afbb | | |
| Update README.md to run deepseek rc21mj authored on Mar 15 | Verified | 389e2c5 | | |
| Update App.js rc21mj authored on Mar 15 | Verified | 66c8883 | | |
| Add files via upload rc21mj authored on Mar 15 | Verified | 1f0f6eb | | |

Commits on Feb 18, 2025

| | | | | |
|--|----------|---------|--|--|
| Delete frontend directory rc21mj authored on Feb 18 | Verified | 9b723d8 | | |
| Merge pull request #4 from rc21mj/databaseConnection rc21mj authored on Feb 18 | Verified | 9638853 | | |
| Merge branch 'main' into databaseConnection rc21mj authored on Feb 18 | Verified | 4753f7b | | |

Commits on Feb 17, 2025

| | | | | |
|-----------------------------|----------|---------|--|--|
| Update Edit function | Verified | 743f27b | | |
|-----------------------------|----------|---------|--|--|

| | | | |
|---|---------|--|----|
| added edit functionality before posting rc21mj committed on Feb 16 | dee431d | | <> |
| added edit functionality before posting rc21mj committed on Feb 16 | f2fb5a0 | | <> |
| added edit option for user preferences rc21mj committed on Feb 16 | fe56744 | | <> |
| Changed preferenceForm.js rc21mj committed on Feb 16 | c88e4a0 | | <> |
| Pushing Sprint 2, Scrum 38 rc21mj committed on Feb 16 | 7ec3cc2 | | <> |

Commits on Feb 15, 2025

| | | | |
|--|---------|--|----|
| Updating Scrum 66 rc21mj committed on Feb 15 | 689cc61 | | <> |
| Changed frontend to React from Fiber rc21mj committed on Feb 15 | 476a7b5 | | <> |

Commits on Feb 3, 2025

| | | | | |
|--|----------|---------|--|----|
| Update tone.go rc21mj authored on Feb 3 | Verified | 70d99b3 | | <> |
| Update Save.py rc21mj authored on Feb 3 | Verified | c4ed348 | | <> |
| Update LLMintegration.py rc21mj authored on Feb 3 | Verified | 3a9e3e4 | | <> |

Commits on Feb 2, 2025

| | | | |
|---|---------|--|----|
| Changed tone.py to save user preferences rc21mj committed on Feb 2 | 9237634 | | <> |
| User topic/tone selection rc21mj committed on Feb 2 | 03c4120 | | <> |

main

rc21mj

All time

Commits on Jan 25, 2025

| | | | | |
|---|----------|---------|--|----|
| Delete Sprint1/Scrum66/h rc21mj authored on Jan 25 | Verified | 5807c2b | | <> |
| Add files via upload rc21mj authored on Jan 25 | Verified | 8bc3f5b | | <> |
| Create h rc21mj authored on Jan 25 | Verified | 6321ad2 | | <> |
| Delete userPreference.html rc21mj authored on Jan 25 | Verified | 377b941 | | <> |

| | | | | |
|---|----------|---------|--|--|
| Delete savingToDb.py rc21mj authored on Jan 25 | Verified | 3db4de7 | | |
| Delete Sprint1notes.pdf rc21mj authored on Jan 25 | Verified | f57516a | | |
| Delete LLMintegration.py rc21mj authored on Jan 25 | Verified | 1998fd1 | | |
| Merge branch 'main' of https://github.com/rc21mj/COSC4P02 rc21mj committed on Jan 25 | | 5eb7183 | | |
| First commit rc21mj committed on Jan 25 | | 69dc999 | | |

Commits on Jan 19, 2025

| | | | | |
|---|----------|---------|--|--|
| Rename Release_Planning_Template (2).pdf to ReleasePlanning.pdf rc21mj authored on Jan 19 | Verified | fac8261 | | |
| Add files via upload rc21mj authored on Jan 19 | Verified | 00e8816 | | |
| Delete Documents/Release Plan - Group 8.pdf rc21mj authored on Jan 19 | Verified | 1e20207 | | |

Commits on Jan 12, 2025

| | | | | |
|---|----------|---------|--|--|
| Delete Project Proposal rc21mj authored on Jan 12 | Verified | 382f2f3 | | |
| Rename 4p02 proposal.pdf to ProjectProposal.pdf rc21mj authored on Jan 12 | Verified | c55e23c | | |
| Add files via upload rc21mj authored on Jan 12 | Verified | 48d276c | | |

















Commits on Jan 8, 2025

















| | | | | |
|---|----------|---------|--|--|
| Initial commit rc21mj authored on Jan 8 | Verified | fa1ade9 | | |
|---|----------|---------|--|--|

Will

- Frontend Setup
- Base frontend design
- Linkedin Posting setup (text posting, image posting)
- Oauth logic design and database storage
- User Dashboard
- Generate Post Form
- Documentation
- Image and text generation integration
- Web Scraper
- Manual Test Cases

| | | | | |
|---|--|---------|--|--|
| Commits on Apr 24, 2025 | | | | |
| Merge branch 'main' of https://github.com/rc21mj/COSC4P02 WillYoachim committed 4 days ago | | 88aa608 | | |
| Update Dashboard WillYoachim committed 4 days ago | | 7aaaf28 | | |

| | | |
|--|---------------------------------|---|
| -o- Commits on Apr 23, 2025 | | |
| Merge branch 'main' of https://github.com/rc21mj/COSC4P02 | WillYochim committed 4 days ago | 6a2f5b1   |
| Finish image uploading to linkedin logic | WillYochim committed 4 days ago | 82687c2   |
| Merge branch 'main' of https://github.com/rc21mj/COSC4P02 | WillYochim committed 4 days ago | b9a0d1d   |
| MakeAPost change and Dashboard additions. | WillYochim committed 4 days ago | 17f8d0d   |
| Merge branch 'main' of https://github.com/rc21mj/COSC4P02 | WillYochim committed 4 days ago | ea1194e   |
| Minor change | WillYochim committed 4 days ago | 1ab6dbb   |
| Remove .DS_Store files and add .gitignore to exclude them; update README for backend navigation | WillYochim committed 4 days ago | 9d84a13   |
| Remove unnecessary files and unused functions. Add in dashboard. | WillYochim committed 4 days ago | 5599e79   |

| | | |
|--|--------------------------------|---|
| -o- Commits on Apr 21, 2025 | | |
| Update linkedinAPI.py  | WillYochim authored last week | Verified 595a758   |
| Update mergedApp.py  | WillYochim authored last week | Verified 90a4df1   |
| -o- Commits on Mar 21, 2025 | | |
| Update scraper to include business, arts and travel | WillYochim committed on Mar 21 | fab806e   |
| -o- Commits on Mar 19, 2025 | | |
| Demo | WillYochim committed on Mar 19 | 8621aed   |
| Demo prep | WillYochim committed on Mar 19 | e199812   |
| Merge branch 'main' of https://github.com/rc21mj/COSC4P02 | WillYochim committed on Mar 19 | 6d9ccd4   |
| Demo prop (posting + added pages) | WillYochim committed on Mar 19 | 194ec7a   |

| | |
|---|---|
| Commits on Mar 15, 2025 | |
| Update linkedinAPI.py  | Verified ba52313   |
| Commits on Mar 7, 2025 | |
| Add files via upload | Verified 383fff2   |
| Commits on Mar 2, 2025 | |
| Create linkedinImplementation.html | Verified e95a14d   |
| Create flaskLinkedinTEMP.py  | Verified 221a4dd   |
| Create linkedinAPI.py  | Verified 0e90f8a   |
| Commits on Feb 17, 2025 | |
| Create app.py | Verified 085e0d7   |
| Create index.html | Verified 9e6e9ef   |


































| | |
|--|---|
| Commits on Feb 3, 2025 | |
| Create sampleFlaskApp.py | Verified 1bff263   |
| Create linkedinAPI.py | Verified 6fe4534   |
| Delete Sprint1/Scrum97 | Verified 09ae5bc   |
| Create Scrum97 | Verified 820f564   |
| Commits on Jan 10, 2025 | |
| Update README.md | Verified cd5c2b3   |
| Update README.md | Verified 1003610   |
| Update README.md | Verified ff2a378   |
| Update README.md | Verified d5cab32   |
| Update README.md | Verified 7ff93f8   |
| Update README.md | Verified cee0512   |
| Rename PostPinoer.png to PostPioneer.png | Verified 854f41e   |

Shihab

- Front end design
- Backend Ollama integration
- Automated testing using Pytest
- Focused on backend logic for API integration with LinkedIn and Twitter + model interaction through Ollama and web scraping
- Web scraping
- Prompt engineering
- Documentation
- Scrum master

| | | | |
|--|------------------------------------|----------|---------|
| Commits on Apr 24, 2025 | | | |
| Updated registration restrictions | shihabkhateeb authored 4 days ago | Verified | 748e617 |
| Commits on Apr 23, 2025 | | | |
| created web scraper test files | shihabkhateeb authored 4 days ago | Verified | 34f16d9 |
| batch meeting notes upload | shihabkhateeb authored 4 days ago | Verified | a416ac9 |
| scheduler testing, other testing overhauled. | shihabkhateeb committed 4 days ago | | d99aaf1 |
| placeholder function deleted, requirements update. | shihabkhateeb committed 4 days ago | | 9dad57a |
| Commits on Apr 22, 2025 | | | |
| Created test_twitter.py | shihabkhateeb authored 5 days ago | Verified | db6c8bb |
| Create linkedin_testing.py | shihabkhateeb authored 5 days ago | Verified | 163729f |
| Update README.md for backend running. | shihabkhateeb authored 5 days ago | Verified | f56d771 |

| | |
|-------------------------|--|
| Commits on Apr 20, 2025 | <div>updated requirements.txt for venv creation.</div> <div>  shihabkhateeb authored last week <div>Verified</div> <div>d0807e7</div> <div>   </div> </div> |
| Commits on Apr 19, 2025 | <div>File reorganization, delete Sprint1</div> <div>  shihabkhateeb authored last week <div>Verified</div> <div>bd77304</div> <div>   </div> </div> |
| Commits on Apr 5, 2025 | <div>Update README.md</div> <div>  shihabkhateeb authored 3 weeks ago <div>Verified</div> <div>393b85a</div> <div>   </div> </div> |
| Commits on Mar 23, 2025 | <div>meeting notes batch upload</div> <div>  shihabkhateeb authored on Mar 23 <div>Verified</div> <div>20d1b6f</div> <div>   </div> </div> |
| Commits on Mar 15, 2025 | <div>Home page addition, main app updates to match.</div> <div>  shihabkhateeb authored on Mar 15 <div>Verified</div> <div>2a281e8</div> <div>   </div> </div> <div>fixed ui issues with Posting.</div> <div>  shihabkhateeb authored on Mar 15 <div>Verified</div> <div>91adf12</div> <div>   </div> </div> |
| Commits on Mar 6, 2025 | <div>basic webscraper added</div> <div>  shihabkhateeb authored on Mar 6 <div>Verified</div> <div>bcae060</div> <div>   </div> </div> |
| Commits on Feb 18, 2025 | <div>Updated UI to include multiple platforms.</div> <div>  shihabkhateeb committed on Feb 18 <div>Verified</div> <div>204d3b5</div> <div>   </div> </div> |

| | |
|-------------------------|---|
| Commits on Feb 3, 2025 | <div>14-1-25 Meeting with Stakeholder</div> <div>  shihabkhateeb authored on Feb 3 <div>Verified</div> <div>bcc21ec</div> <div>   </div> </div> <div>18-1-25 Meeting Notes</div> <div>  shihabkhateeb authored on Feb 3 <div>Verified</div> <div>8382d48</div> <div>   </div> </div> <div>16-1-25 Meeting Notes</div> <div>  shihabkhateeb authored on Feb 3 <div>Verified</div> <div>d31e5e4</div> <div>   </div> </div> <div>15-1-25 Meeting Notes</div> <div>  shihabkhateeb authored on Feb 3 <div>Verified</div> <div>a8a1eb9</div> <div>   </div> </div> <div>14-1-25 Meeting Notes</div> <div>  shihabkhateeb authored on Feb 3 <div>Verified</div> <div>ff172d6</div> <div>   </div> </div> <div>Create 10-1-25 Meeting</div> <div>  shihabkhateeb authored on Feb 3 <div>Verified</div> <div>6199295</div> <div>   </div> </div> |
| Commits on Jan 19, 2025 | <div>Add files via upload</div> <div>  shihabkhateeb authored on Jan 19 <div>Verified</div> <div>1e20e5b</div> <div>   </div> </div> <div>replaced release plan file.</div> <div>  shihabkhateeb authored on Jan 19 <div>Verified</div> <div>0d41aed</div> <div>   </div> </div> <div>Release planning document uploaded.</div> <div>  shihabkhateeb authored on Jan 19 <div>Verified</div> <div>c4ba449</div> <div>   </div> </div> |
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Conclusion

One of the key principles of Agile is to embrace change, expecting system requirements to evolve and designing the system to adapt accordingly.

Throughout the project, we faced several challenges that required us to rethink our sprints, rework our timeline, and adapt our communication strategy to stay aligned as a team. By accepting change as part of the process, we became more flexible and solution-focused.

This experience gave us a real-world understanding of what it means to work on a software engineering project — from collaboration and tool usage to strategic pivots. These lessons will be something we embrace as we carry forward the mindset of adaptability, teamwork, and continuous learning into our future careers.