

FactFinder

Justice League



Agenda

- Team Introduction
- Improvements from professor feed back
- Project Description
- Team working agreement
- Personas
- Minimum Valuable Product
- Technologies and Algorithms
- Diagrams
 - Architecture diagrams
 - Sequence diagrams
 - ER Diagram
 - Class Diagram
- Sprint 3 Recap
- Product Backlog
 - Sprint Summary
 - Sprint 4 Backlog
 - Test Cases
- Metrics
 - Velocity Report
 - Burn Down Chart
- Retrospective
- Project Demo
 - App Screenshots
 - API Screenshots
- Live application demo

Improvements made from Professor Feedback

1. Updated User stories for product backlog
2. Explained Technologies & Algorithms with details.
3. Included Class Diagram
4. Improved Team velocity report
5. Included Story point estimation to user stories
6. Included Status of test cases
7. Improved Live application demo

Project Description

Fact Finder is a web app designed to combat online misinformation by differentiating between fake and real news. Additionally, it can create a summary of the news.

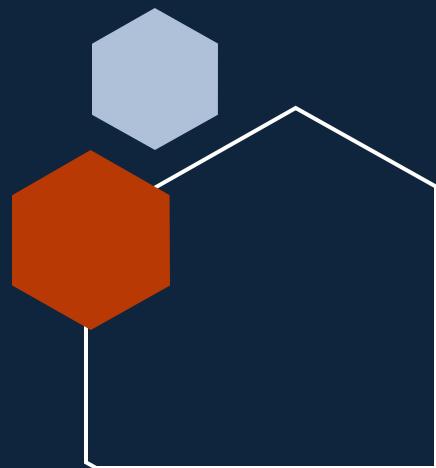
For anyone concerned about online misinformation and facing time constraints for reading news articles. who upload the news article the Fact Finder web app is a web app that use machine learning and deep learning algorithms that can detect misinformation.

Unlike believe any information on internet.

Our application verifies the authenticity of information and saves time by creating summaries of articles.

Benefit Outcomes:

- Ensuring the authenticity of the information.
- Saves valuable time by generating summaries of the articles.
- Contributes to the fight against misinformation.



Team working agreement

Team Agreement

CS691 - Team Justice League (23915)

Purpose of the Agreement:

To ensure the successful completion of our collaborative project and foster a positive working environment for all team members.

Team Values:

1. Collaboration: We value open communication and collaboration, encouraging all team members to actively engage in discussions and contribute ideas for the project's success.
2. Accountability: Each team member is accountable for their assigned tasks, and if challenges arise, open communication is essential to address and overcome obstacles collectively.
3. Transparency: We prioritize transparent communication through various channels to build trust within the team. Keeping cameras on during Zoom meetings is encouraged for meaningful team interactions.

Communication:

1. The team will utilize Zoom for weekly meetings to facilitate meaningful discussions. Weekly meetings will be held every Tuesday, Friday, and Sunday. Attendance is mandatory, with exceptions allowed in exceptional cases.
2. Active participation in meetings is expected from every team member, including sharing ideas, engaging in discussions, and providing updates on individual work progress.
3. For immediate discussions, urgent matters, and doubts, a WhatsApp messenger group will be employed.
4. Microsoft Sharepoint will be the designated platform for sharing final deliverables, allowing all team members to collaboratively edit documents.
5. A shared platform, such as Jira, will be used for project management. It includes designated groups for different roles, facilitating efficient collaboration among Developers, Business Analysts, and the Product Owner.

Owner:

Work Division and Participation:

1. Project work will be equitably divided among team members, with equal responsibilities assigned to ensure a balanced workload.
2. Timely completion of assigned work is crucial. In cases of potential delays, team members must communicate with their peers to redistribute tasks accordingly.
3. Work separation between members is voluntary. However, if a member lacks participation, the Product Owner reserves the right to assign necessary tasks to ensure project progress.
4. In the event of a member's absence during meetings, the member pledges to support the decisions made during the meeting.

Team Members:

1. Saurabh chaudhary
2. Suraj Salunkhe
3. Kavita Kamtekar
4. Manthan Kale
5. Maheswari Vidyadharani
6. Rushabh Shingala
7. Sai Kumar Tata
8. Gayatri Kishor Kulkarni

Personas



Background: Maria is a community activist working on social justice issues. She recognizes the role of misinformation in shaping public opinion and wants to combat false narratives that may undermine her advocacy efforts. Maria is motivated to use the web application as a tool to verify information before sharing it within her community.

Age: 35

Occupation: Community Activist

Goals and Motivation: Maria's goal is to empower her community with reliable information. By leveraging the web application, she aims to strengthen the credibility of her advocacy work, foster informed discussions, and counteract misinformation that may be used to undermine social justice causes



Personas

Background: David owns a small business that heavily relies on its online presence for customer engagement. He's concerned about potential misinformation impacting the reputation of his business. The web application is crucial for David to verify news and updates related to his industry.

Age: 38

Occupation: Small Business Owner

Goals and Motivation: David's primary goal is to safeguard his business's reputation. By using the web application, he aims to prevent the spread of false information that could harm customer trust and loyalty. His motivation is to maintain transparency and integrity in his business communications.



Personas

Background: Michelle is a fitness and health enthusiast who frequently relies on online health-related information. With the abundance of health-related news articles and social media posts, Michelle often encounters conflicting information. The web application is valuable for him to discern between credible and misleading health information.

Age: 31

Occupation: Fitness Trainer

Goals and Motivation: Michelle's primary goal is to maintain a healthy lifestyle and share accurate health advice with her followers. By using the web application, he aims to avoid the spread of misinformation in the fitness and health community, contributing to a more informed and health-conscious online environment.

MVP(Minimum Valuable Product):

- 1) The user will also be able to check news without having account in FactFinder unless user wants to check his search News History.
- 2) The "Homepage" tab will display a short video of what the Fake news is.
- 3) The user should navigate to "Verify News" tab and post news as a text in the Textbox.
- 4)The user can click summarize Button to create the summary of the News Articles.
- 5) The user will click on verify news button or summary button.
- 6) The system will then generate a response based on our ML model.
- 7) The user will be able to get a response if the news/text posted was Fake or Real.
- 8) The "About us" tab will display explanation of the website, what it does and how it works.
- 9)The "Team" tab will display explanation of each team member of the factfinder.
- 10) The user can Register with email-ID and password and user should able to click on submit button to get registered successfully.
- 11) The user should Login with email-ID and password.
- 12) After Login, user should see TABS such as Verify News ,Blog , Search History, and a Chat etc.
- 13) The user can click on Blog tab and post any latest news or facts for extra information for people.
- 14)User can comment on a particular blog and give there own opinions.
- 15)Users can click on chat tab and chat with like-minded people to discuss about any latest news for more information.

Technologies

For Front-End Development :

1. JavaScript:



JavaScript is an object-oriented programming language primarily used for creating interactive and dynamic web application. Main functionalities of JS are client-side scripting meaning it can run on user's web browser rather than on web server which is very helpful for dynamic web pages. It can interact with DOM(Document Object Model) of a web page, we can manipulate DOM using JS like adding events, button clicks, keyboard inputs, form submissions. It also supports asynchronous programming using callbacks, promises and await features. JS supports all major web browsers making it universal language for web development. And lastly it can support many frameworks and libraries such as React.js, Angular, Node.js and many more.

Technologies(Cont..)

For Front-End Development :



2.HTML5:

Hypertext Markup Language 5 or HTML5 is the latest version of the standard markup language used to create web pages and applications. HTML5 introduces many new features like, Semantic markup such as header, footer, nav, article, section and aside which improved overall structure and accessibility of web content. HTML5 also supports audio and video elements. The canvas element is used for 2D graphics and animations directly in web browser.

3.CSS:

CSS is a stylesheet language used for styling the HTML and XML documents.

Technologies(Cont..)

For Back-end Development

Python :

Python is an Object-Oriented high-level language known for its simplicity, readability and versatility. Its syntax is designed to be clear and readable very much like the English language. Python is one of the popular programming languages for Machine learning. It has so many libraries and frameworks specifically designed for ML and deep learning like

NumPy: It provides the foundation for many other libraries in the python scientific computing ecosystem, it supports multidimensional arrays and matrices.

Pandas: It is the most useful data manipulation library which provides data structures like data frames and series. While working on the back-end code for our project we used DataFrame. We import the training data which was in csv format as a Data Frame.

Scikit-learn: It is a ML library which is ideal for data mining and analysis, it has many algorithms for classification, regression, clustering and model evaluation. For the classification of our data frame, we used logistic regression from sklearn.linear_model. To train the model we need to split the data which we did using sklearn.model_selection. And to get the accuracy report and classification report of the model we used the sklearn.metrics.

TensorFlow and PyTorch: These deep learning frameworks are the main tools to build and train neural networks for many ML tasks, we used these libraries for natural language processing for our project. For our project we created a RNN Neural network using tensorflow.keras.models

Technologies(Cont...)

Frameworks and Libraries



1. Flask: It is a lightweight and flexible web framework for python, ideal for building web applications. Flask is often referred to as a microframework because it provides the essentials for building web applications without imposing strict rules or dependencies. Flask uses a simple and intuitive routing system to map URLs to Python functions. For our application we used three endpoints as routing system.

```
app = Flask(__name__)
@app.route('/process', methods=['POST'])
@app.route('/summarize', methods = ['POST'])
@app.route('/', methods = ['POST'])
```

Flask includes a built-in template engine called Jinja2, which allows anyone to generate HTML content dynamically by combining templates with data from Python code. It includes support for managing user sessions and implementing authentication and authorization mechanisms.

Technologies(Cont...)

Frameworks and Libraries

2.React  : React is a JavaScript library for building user interfaces, particularly single-page applications that require dynamic and interactive UI. It uses component-based architecture in which UIs are divided into reusable components. React uses virtual DOM to maintain the UI hierarchy any change in UI first apply to virtual DOM and then reconciled with actual DOM resulting minimal updates in the code. It introduced JavaScript XML syntax extension which allow to write HTML like code within the JS.

Technologies(Cont...)

Database

1. Firebase :



Firebase Realtime Database is a cloud-hosted NoSQL database. It is provided by Google as part of the Firebase platform. It allows developers to store and synchronize data in real-time between clients and servers which enable the development of responsive and collaborative web and mobile applications. It uses JSON data model to stored structured data. It support built-in offline data

Algorithms

Machine Learning Algorithms (scikit-Learn) :
Scikit-learn is a powerful and widely used open-source ML library for Python. It has many supervised and unsupervised learning algorithms, data preprocessing, feature selection and model evaluation.
We used supervised learning called logistic regression for our project using `sklearn.linear_model`.
We split our data using `model_selection`.

```
[ ] from sklearn.feature_extraction.text import TfidfVectorizer
from sklearn.model_selection import train_test_split
from sklearn.linear_model import LogisticRegression, LinearRegression
from sklearn.metrics import accuracy_score, classification_report

X = df['content']
y = df['classification']

#vectorizing the data
vectorization = TfidfVectorizer()
X_vector = vectorization.fit_transform(X)

X_train, X_test, y_train,y_test = train_test_split(X_vector,y,test_size=0.25,random_state=42)

# fitting the data to the model
model = LogisticRegression()
model.fit(X_train,y_train)
result = model.predict(X_test)
```

Algorithms(cont..)

Recurrent Neural Network(RNN): RNN is a high-level neural network from keras API. It is a class of NN designed for processing sequential data. RNNs have loops within their architecture, allowing them to maintain information across time steps. To generate summary from a news article LSTM type of RNN is ideal and we used for our project.

```

import tensorflow as tf
from tensorflow.keras.models import Model
from tensorflow.keras.layers import Input, LSTM, Dense, Embedding, Attention
from tensorflow.keras.preprocessing.text import Tokenizer
from tensorflow.keras.preprocessing.sequence import pad_sequences

X = df_main['Text']
y = df_main['summary']

X_train, X_test, y_train, y_test = train_test_split(X, y, test_size=0.25, random_state = 42)

#Tokenize input and target summaries
tokenizer_x = Tokenizer(num_words=1000)
tokenizer_x.fit_on_texts(X_train)
X_train_sequences = tokenizer_x.texts_to_sequences(X_train)
#max_input_len = max(len(seq) for seq in X_train_sequences)

tokenizer_y = Tokenizer(num_words=250)
tokenizer_y.fit_on_texts(y_train)
y_train_sequences = tokenizer_y.texts_to_sequences(y_train)
#max_traget_len = max(len(seq) for seq in y_train_sequences)

X_train_padded = pad_sequences(X_train_sequences, maxlen = 1000, padding = 'post')
y_train_padded = pad_sequences(y_train_sequences, maxlen = 250, padding = 'post')

#encoder

```

```

#encoder
encoder_input = Input(shape = (1000,))
encoder_embedding = Embedding(input_dim = 1000, output_dim = 250)(encoder_input)
encoder_lstm = LSTM(256,return_sequences=True, return_state= True)
encoder_output, state_h, state_c = encoder_lstm(encoder_embedding)
encoder_states = [state_h, state_c]

#decoder
decoder_input_data = pad_sequences(y_train_sequences, maxlen = 250, padding = 'post')[::-1]
decoder_target_data = pad_sequences(y_train_sequences, maxlen = 250, padding = 'post')[1:]

decoder_input = Input(shape=(None,))
decoder_embedding = Embedding(input_dim = 1000, output_dim = 250)(decoder_input)
decoder_lstm = LSTM(256,return_sequences=True, return_state= True)
decoder_output, _, _ = decoder_lstm(decoder_embedding, initial_state = encoder_states)
attention = Attention()
context_vector = attention([decoder_output,encoder_output])
decoder_combined_context = tf.concat([decoder_output, context_vector], axis=-1)
decoder_dense = Dense(250, activation = 'softmax')
decoder_output = decoder_dense(decoder_combined_context)

RNN_model = Model([encoder_input,decoder_input], decoder_output)
RNN_model.compile(optimizer = 'adam', loss= 'sparse_categorical_crossentropy')
RNN_model.fit([X_train_padded,decoder_input_data], decoder_target_data, batch_size=32, epochs = 10

```

Algorithms(cont..)

We also used Bidirectional and auto-regressive transformers(BART) neural network which is introduced by Facebook AI. Unlike traditional models like GPT, BART incorporates bidirectional information flow. This allows BART to capture bidirectional context and improve performance on tasks like text generation and completion.

```
[ ]  from transformers import BartTokenizer, TFBartForConditionalGeneration

    # Load BART tokenizer and model
    bart_tokenizer = BartTokenizer.from_pretrained('facebook/bart-large-cnn')
    bart_model = TFBartForConditionalGeneration.from_pretrained('facebook/bart-large-cnn')

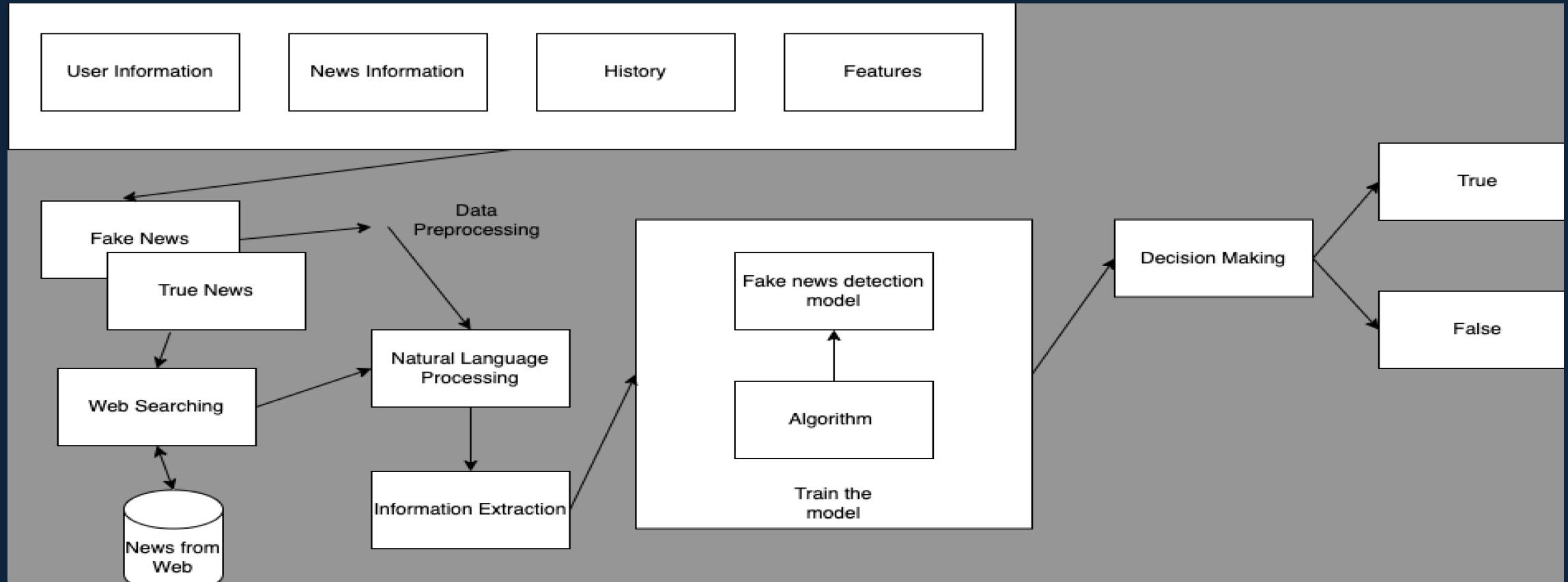
    def summarize(text):
        # Tokenize and preprocess input text
        input_token = bart_tokenizer([text], max_length=1024, return_tensors='tf', truncation=True, padding=True)

        # Generate summary
        outputs = bart_model.generate(input_token['input_ids'])

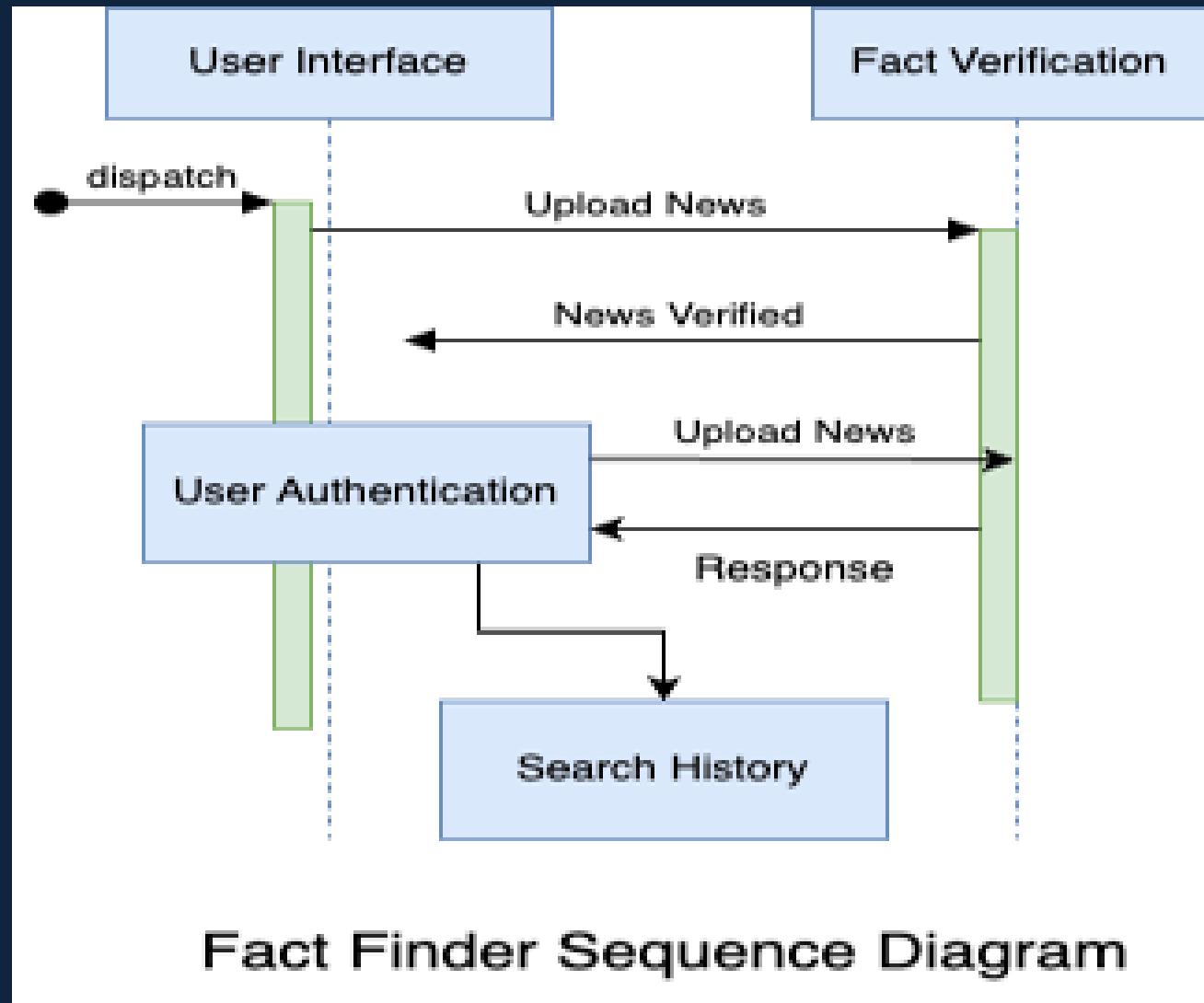
        # Decode generated summary
        generated_summary = bart_tokenizer.decode(outputs[0], skip_special_tokens=True)

    return generated_summary
```

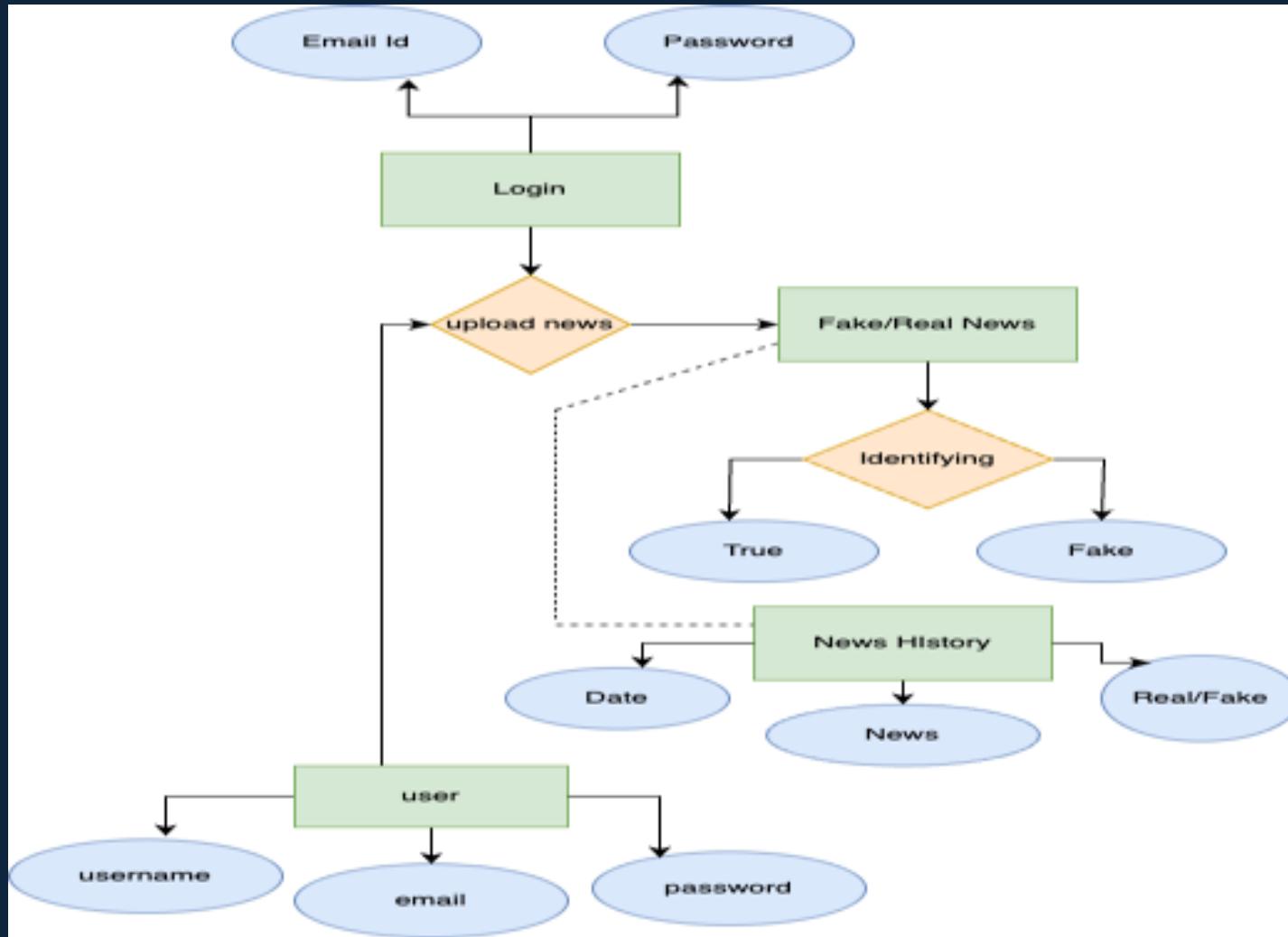
Architecture Diagram



Sequence Diagram



Entity-Relation Diagram:



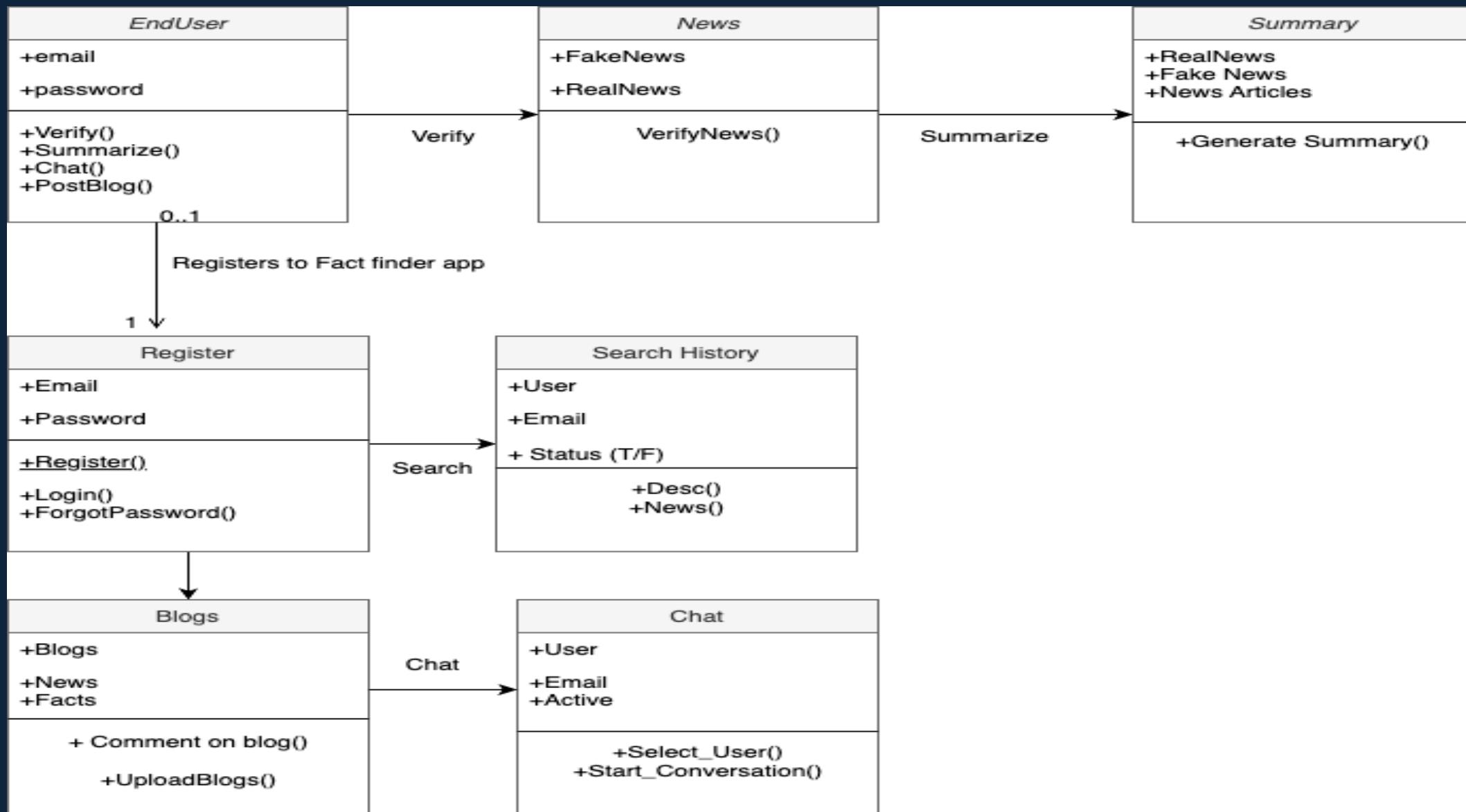


Fig: Class Diagram

Sprint 3 Recap

 FNDJL-45	connect react with flask app	 -   
 FNDJL-46	connect flask app with the model	 -   
 FNDJL-47	create firebase account	 -   
 FNDJL-48	add firebase authentication	 -   
 FNDJL-49	add firebase real time database	 -   
 FNDJL-50	update firebase database rules	 -   
 FNDJL-51	add firebase configuration in react app	 -   
 FNDJL-52	give login register	 -   
 FNDJL-53	add reset password functionality	 -   
 FNDJL-54	make chat function available	 -   
 FNDJL-55	burndown chart	 -   
 FNDJL-56	Test cases	 -   

Product Backlog

User Story ID	User stories	Acceptance Criteria	Estimation
FNDJL-4	As a Business owner, I want to be able to log in to the application so that I can access the website.	<ol style="list-style-type: none"> Given the login page is displayed, when I enter valid credentials and click the "Login" button, then I should be redirected to the home page. Given the login page is displayed, when I enter an invalid username and valid password, then an error message should be shown indicating that the username is not recognized. Given the login page is displayed, when I enter a valid username and an invalid password, then an error message should be displayed indicating that the password is incorrect. Given the login page is displayed, when I leave both username and password fields blank and click the "Login" button, then an error message should be shown indicating that both fields are required. 	3
FNDJL-5	As a security measure, I want my account to be locked after a certain number of unsuccessful login attempts.	<ol style="list-style-type: none"> Given a user has made multiple unsuccessful login attempts, when the maximum allowed attempts are reached, then the user account should be locked. Given a locked account, when the user tries to log in, then an error message should be displayed indicating that the account is locked. Given a locked account, when the user clicks on a "Forgot Password" link, then they should be directed to a password recovery process. 	3

Product Backlog

FNDJL-6	As a fitness coach, I want to register on the website to access exclusive features and personalized content.	Scenario: Successful Registration Given that I am on the registration page, When I enter valid information (first name, last name, email address, and password), And click on the "Register" button, Then I should receive a confirmation message indicating successful registration.	3
FNDJL-9	As a Political leader, I want to learn more about the application and its creators to understand its purpose and credibility.	Scenario: Accessing About Us Page Given: I am on the home page. When: I navigate to the "About Us" tab. Then: The system should display information about the purpose of the application, its creators, and any other relevant details.	4
FNDJL-10	As a Business user, I want to easily find and access contact information to reach out for support or inquiries.	Scenario: Accessing Contact Page Given: I am on any tab other than "Contact." When: I navigate to the "Contact" tab. Then: The system should display contact information or a form for users to get in touch.	4

Product Backlog

User Story ID	User stories	Acceptance Criteria	Estimation
FNDJL-11	As a Business Owner, I want to have access to a user-friendly interface where I can easily input news content for fact-checking.	The input text box should be prominently displayed on the homepage or main landing page. The interface should be intuitive and easy to understand for users of all backgrounds. Users should receive clear feedback after submitting news content for fact-checking.	13
FNDJL-12	As a Fitness Coach, I want to receive fact-checking results in a timely manner, without significant delay.	The fact-checking process should be optimized for speed and efficiency. Users should receive results within a reasonable timeframe after submitting news content. The website should indicate if there are any delays due to high traffic or other technical issues.	3
FNDJL-13	As a Political Leader, I want to be able to view detailed analysis and sources for fact-checked news articles.	Along with the determination of whether the news is fake or true, users should be provided with detailed analysis and sources. The analysis should highlight specific reasons for the determination, such as misleading information or lack of credible sources. Sources should be clickable, allowing users to verify the information independently.	3
FNDJL-16	As a Community Activist, I want to get a brief summary of the news article so that i can have quick understanding of the news to share it with people.	The user must be able to check and validate the news and then must be able to also get a summary of the article that was pasted in the textbox.	13

Product Backlog

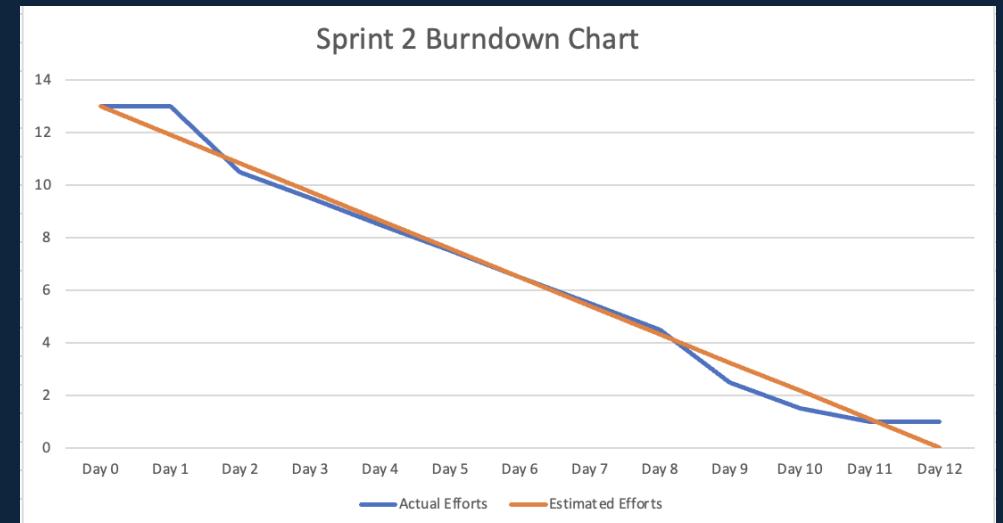
User Story ID	User stories	Acceptance Criteria	Estimation
FNDJL-17	<p>As a business owner,</p> <p>I want to be directed to accurate pages on website,</p> <p>so that i can navigate smoothly throughout the website.</p>	The user should be able to navigate freely without any bugs and navigational errors to all tabs developed for the site	3
FNDJL-18	<p>As a fitness influencer,</p> <p>I want to find out about the contributors of the website</p> <p>so that i can connect with them or know more about the team</p>	The about us page should have all the teams information an ways of connecting with them	3
FNDJL-19	<p>As a sports enthusiast,</p> <p>I want to be able to view my search history.</p> <p>So that i can go back check if i need to retrieve any historical information</p>	There should be a dedicated section or page on the website where I can view my search history. The search history should be displayed in a clear and organized manner, showing the date and time of each search.	8
FNDJL-20	<p>As a business owner,</p> <p>I want to be connected to other business owners through online chat function,</p> <p>so that i can express my views about the news articles.</p>	The website should include a community forum or discussion board where users can create posts, comment on threads, and interact with each other. Users should be able to join specific topic-based groups or communities within the platform	8

Product Backlog

User Story ID	User stories	Acceptance Criteria	Estimation
FNDJL-21	<p>As a Communist Activist ,</p> <p>I want to be able to automatically see the option to copy to clipboard,</p> <p>so that i can copy the summary if i want to use it to share with others.</p>	The copy to clipboard pop up should be automatically be available for the user for convivence if the user wants to copy the summary	3
FNDJL-22	<p>As a business owner</p> <p>I should able to upload post related to news</p> <p>So that I can make sure that news is correct through users feedback</p>	User should be able to upload text blog to a portal and other users should be able to read it.	5
FNDJL-23	<p>As a Business Owner</p> <p>I want to comment on blog post created by other users</p> <p>So that I can validate the news posted on blog</p>	User must be able to write a text comment on blogs posted by other users and it should be visible to other users	4

Sprint 2 Summary

 FNDJL-4	Create home page	 0.5	 DONE	
 FNDJL-16	Ui Updates	 6	 GK	DONE
 FNDJL-17	Create Login page	 4	 K	DONE
 FNDJL-18	Test Cases	 5	 SS	DONE
 FNDJL-19	Burndown Chart	 5	 SS	DONE
 FNDJL-20	Architecture Diagram	 -1	 SS	DONE
 FNDJL-21	Create Register Page	 5	 K	DONE
 FNDJL-22	Create About us Page	 -	 K	DONE
 FNDJL-24	Create Verify News Page	 -	 RU	DONE
 FNDJL-25	Finalize MVP Requirements	 -	 MK	DONE
 FNDJL-26	Upload source_code on github	 -	 ST	DONE
 FNDJL-27	Create Product Backlog	 -	 MK	DONE
 FNDJL-32	Backend testing	 3	 SS	DONE

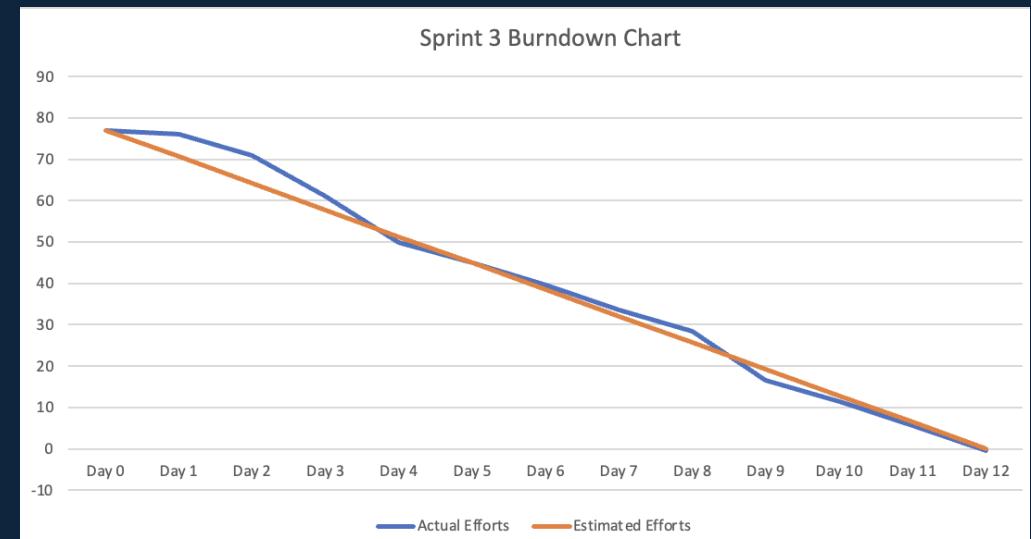


Sprint 2 Summary

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Sprint 3 Summary

 FNDJL-45	connect react with flask app	 -   DONE ▾
 FNDJL-46	connect flask app with the model	 -   DONE ▾
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 FNDJL-48	add firebase authentication	 -   DONE ▾
 FNDJL-49	add firebase real time database	 -   DONE ▾
 FNDJL-50	update firebase database rules	 -   DONE ▾
 FNDJL-51	add firebase configuration in react app	 -   DONE ▾
 FNDJL-52	give login register	 -   DONE ▾
 FNDJL-53	add reset password functionality	 -   DONE ▾
 FNDJL-54	make chat function available	 -   DONE ▾
 FNDJL-55	burndown chart	 -   DONE ▾
 FNDJL-56	Test cases	 -   DONE ▾



Sprint 3 Summary

User Story ID	User stories	Acceptance Criteria	Estimation
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FNDJL-16	As a Community Activist, I want to get a brief summary of the news article so that i can have quick understanding of the news to share it with people.	The user must be able to check and validate the news and then must be able to also get a summary of the article that was pasted in the textbox.	13

Sprint 4 backlog

User Story ID	User stories	Acceptance Criteria	Estimation	Status
FNDJL-16	As a Community Activist, I want to get a brief summary of the news article so that i can have quick understanding of the news to share it with people.	The user must be able to check and validate the news and then must be able to also get a summary of the article that was pasted in the textbox.	13	Completed
FNDJL-17	As a business owner, I want to be directed to accurate pages on website, so that i can navigate smoothly throughout the website.	The user should be able to navigate freely without any bugs and navigational errors to all tabs developed for the site	3	Completed
FNDJL-18	As a fitness influencer, I want to find out about the contributors of the website so that i can connect with them or know more about the team	The about us page should have all the teams information an ways of connecting with them	3	Completed
FNDJL-19	As a sports enthusiast, I want to be able to view my search history. So that i can go back check if i need to retrieve any historical information	There should be a dedicated section or page on the website where I can view my search history. The search history should be displayed in a clear and organized manner, showing the date and time of each search.	8	Completed

Sprint 4 backlog with status

User Story ID	User stories	Acceptance Criteria	Estimation	Status
FNDJL-20	As a business owner, I want to be connected to other business owners through online chat function, so that i can express my views about the news articles.	The website should include a community forum or discussion board where users can create posts, comment on threads, and interact with each other. Users should be able to join specific topic-based groups or communities within the platform	8	Completed
FNDJL-21	As a Communist Activist , I want to be able to automatically see the option to copy to clipboard, so that i can copy the summary if i want to use it to share with others.	The copy to clipboard pop up should be automatically be available for the user for convivence if the user wants to copy the summary	3	Not completed
FNDJL-22	As a business owner I should able to upload post related to news So that I can make sure that news is correct through users feedback	User should be able to upload text blog to a portal and other users should be able to read it.	5	Completed
FNDJL-23	As a Business Owner I want to comment on blog post created by other users So that I can validate the news posted on blog	User must be able to write a text comment on blogs posted by other users and it should be visible to other users	4	Completed

Test Cases

User Story ID	Test Case ID	Name	Objective	Expected Result	Test Data	Status
FNDJL-16	FNDJL-T24	Validating News Article	Validating News Article	The news article is successfully pasted and validated.	Sample news article text.	Pass
FNDJL-16	FNDJL-T25	Invalid News Article Input	To check the behavior when the user pastes an invalid or incomplete news article.	Proper error message is displayed indicating invalid input.	Incomplete news article text, Invalid news article text, Empty textbox.	Pass
FNDJL-16	FNDJL-T26	Retrieving Summary of News Article	To ensure that the user can retrieve a summary of the pasted news article.	To ensure that the user can retrieve a summary of the pasted news article.	Sample news article text.	Pass
FNDJL-16	FNDJL-T27	Summary Generation for Long News Article	To test the system's ability to generate a summary for a long news article.	A concise summary is generated for the long news article.	Lengthy news article text	Pass
FNDJL-17	FNDJL-T28	Navigation to Home Page	To verify that the user can navigate to the home page of the website.	The user is directed to the home page without encountering any bugs or errors.	Click on the "Home" tab/link.	Pass
FNDJL-17	FNDJL-T29	Navigation to About Us Page	To ensure that the user can navigate to the About Us page of the website.	The user is directed to the About Us page without encountering any bugs or errors.	Click on the "About Us" tab/link.	Pass
FNDJL-17	FNDJL-T30	Navigating to Chat function	To ensure that user can navigate to chat function page	The page where user can chat with other users should be displayed	Click on the "chat with others" tab/link.	Pass
FNDJL-18	FNDJL-T31	Presence of Team Information	To ensure that the About Us page contains information about the team members.	The About Us page displays detailed information about each team member, including their roles and backgrounds.	Open the About Us page.	Pass

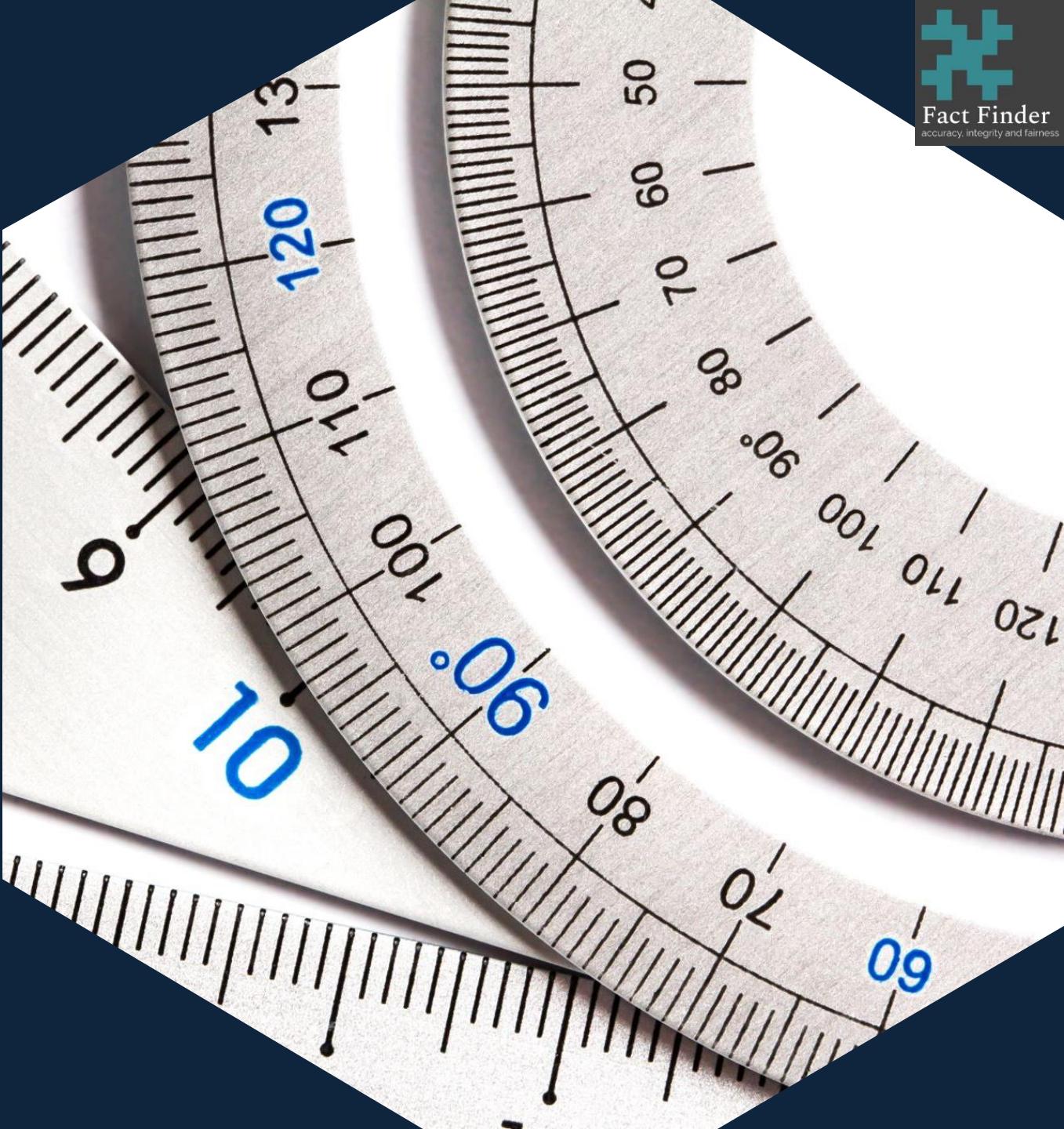
Test Cases

User Story ID	Test Case ID	Name	Objective	Expected Result	Test Data	Status
FNDJL-18	FNDJL-T32	Connecting with Team Members	To verify that the user can connect with team members through provided contact information or social media links.	Contact information (such as email addresses or contact forms) and social media links for team members are visible and functional.	Check for email addresses, contact forms, and social media links on the About Us page.	Pass
FNDJL-19	FNDJL-T33	Accessing Search History Section	To verify that the user can access the dedicated section or page for viewing search history.	The user is able to locate and access the search history section/page.	Navigate to the "Search History" tab/link.	Pass
FNDJL-19	FNDJL-T34	Display of Search History Entries	To ensure that the search history is displayed in a clear and organized manner.	The search history is presented in a list format, showing each search entry with its corresponding date and time.	Open the Search History section/page.	Pass
FNDJL-19	FNDJL-T35	Chat Interface Display	To ensure that the online chat interface is displayed properly.	The chat interface is visible and functional, allowing users to initiate and engage in chat conversations.	Open the Chat section/page.	pass
FNDJL-19	FNDJL-T36	Initiating a Chat	To verify that the user can initiate a chat conversation with other business owners.	The user is able to start a chat session by sending a message.	Type and send a message in the chat interface.	pass
FNDJL-19	FNDJL-T37	Receiving Chat Responses	To ensure that the user can receive responses from other business owners in the chat.	Other users' responses to the initiated chat are displayed in the chat interface.	Wait for responses from other users after sending a message.	pass

Test Cases

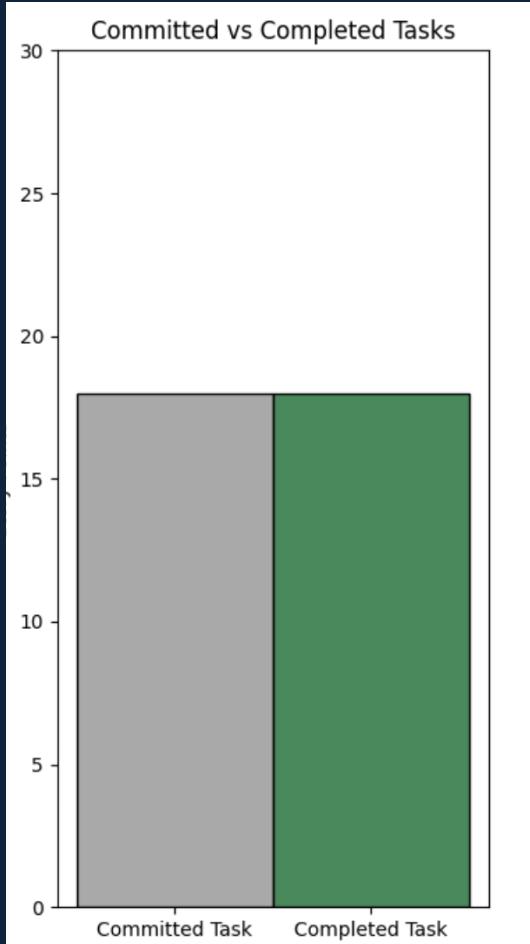
User Story ID	Test Case ID	Name	Objective	Expected Result	Test Data	Status
FNDJL-20	FNDJL-T38	Copying Summary Text	To verify that the summary text is successfully copied to the clipboard. To verify that the summary text is successfully copied to the clipboard.	After clicking the copy to clipboard option, the summary text is available for pasting elsewhere.	Click on the copy to clipboard option, then attempt to paste the copied text into a text editor or document.	N/A
FNDJL-21	FNDJL-T39	Accessing Post Upload Functionality	To verify that the user can access the post upload functionality on the website.	The user is able to locate and access the feature to upload a post related to news.	Navigate to the "Upload Post" section/page.	pass
FNDJL-21	FNDJL-T40	Uploading a Post	To ensure that the user can successfully upload a post related to news.	The user is able to create a post, attach relevant news content, and upload it to the website.	Create a post related to news content. Attach relevant news articles or summaries to the post.	pass
FNDJL-23	FNDJL-T41	Accessing Comment Functionality	To verify that the user can access the comment functionality on the website.	The user is able to locate and access the feature to comment on blog posts created by other users.	Navigate to the blog post page where comments are allowed.	pass
FNDJL-24	FNDJL-T42	Posting a Comment	To ensure that the user can successfully post a comment on a blog post.	The user is able to compose a comment and submit it on the blog post page.	Navigate to the blog post page where comments are allowed.	pass
FNDJL-25	FNDJL-T43	Visibility of Comments	To ensure that comments posted by other users are visible to the user.	The user can view comments posted by other users on the blog post page.	Access the blog post page and verify the visibility of comments.	pass

Metrics

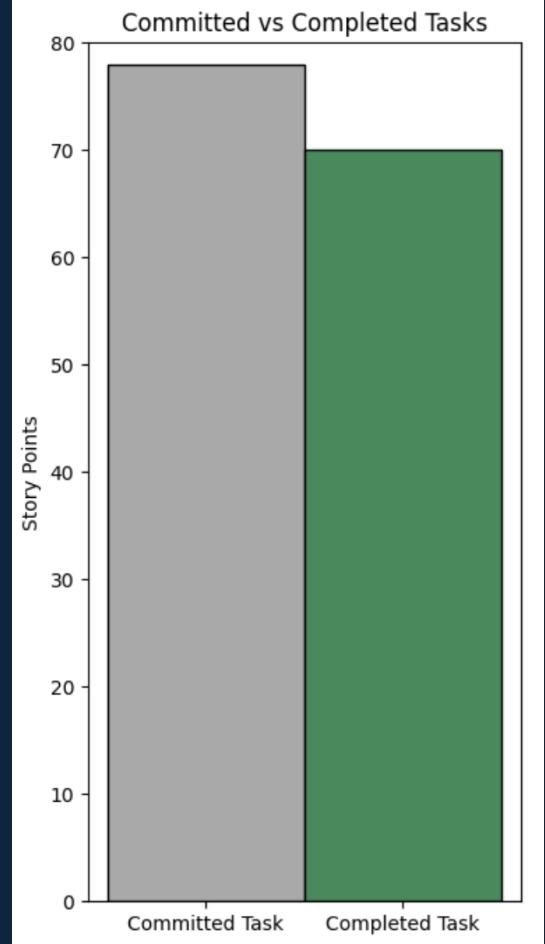


Team Velocity

Sprint 2



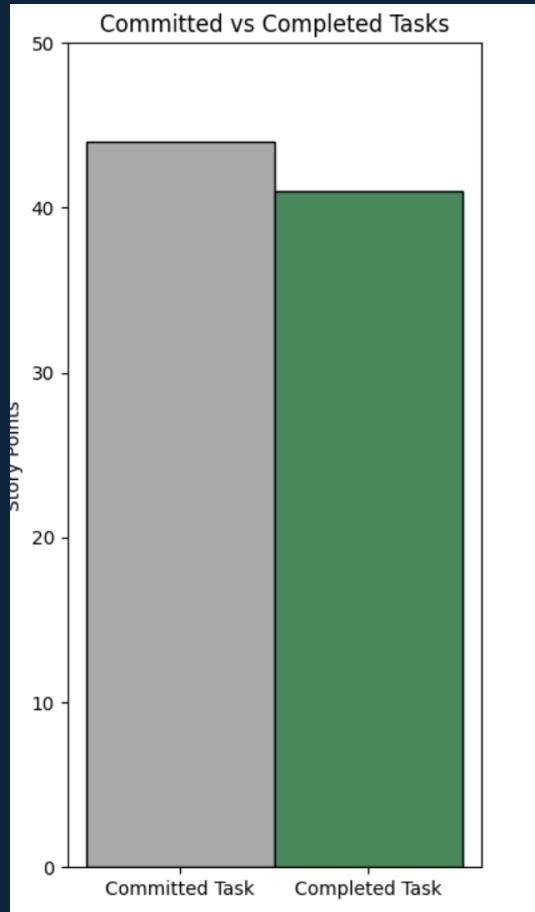
Sprint 3



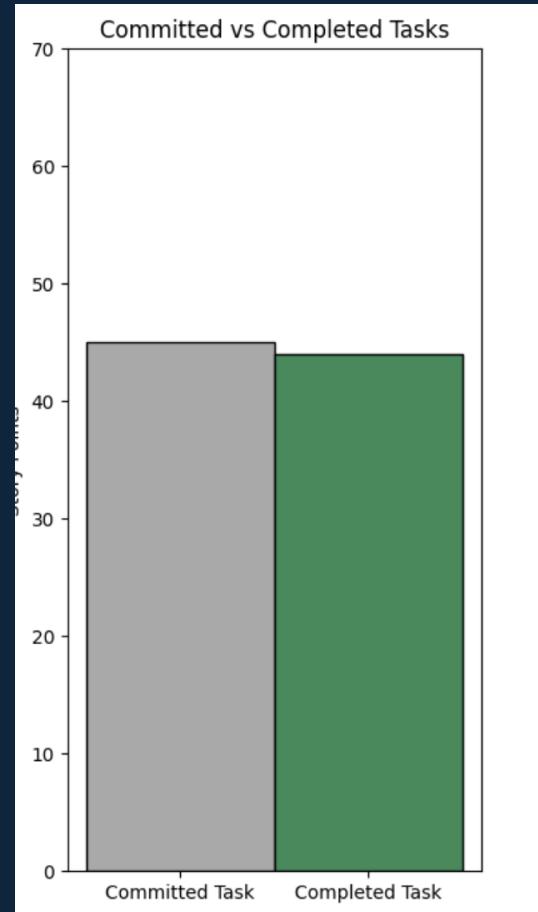
Completed(18)/Committed Ratio(18) : 100% Average Completed(70)/Committed Ratio(78) : 89.74%

Team Velocity

Sprint 4



Average

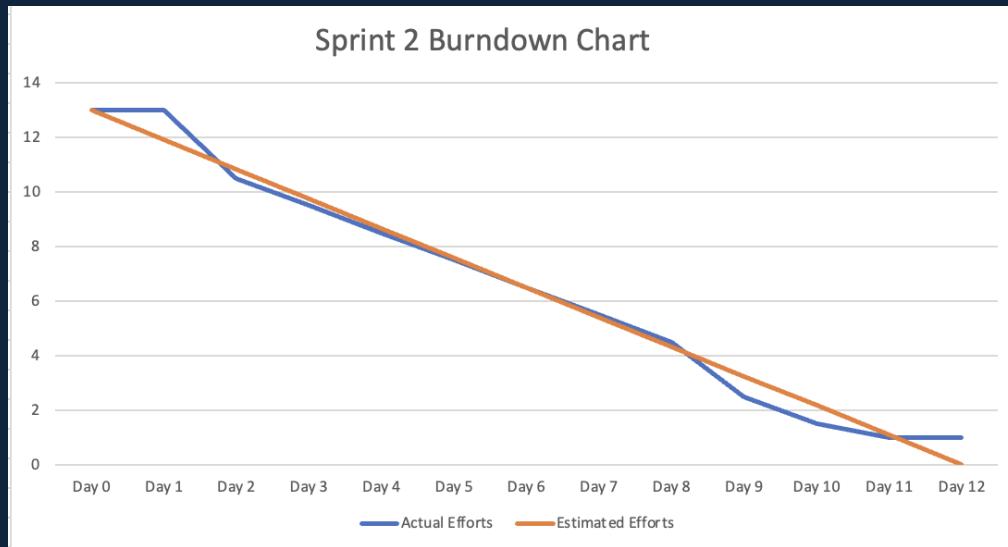


Completed(41)/Committed Ratio(44) : 93.18%

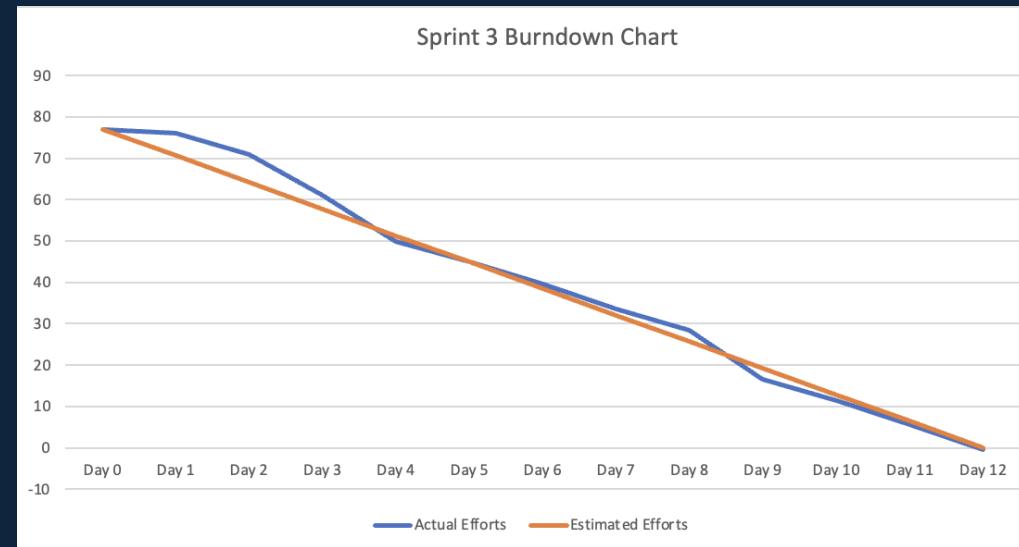
Average Completed/Committed Ratio : 97.99%

Burndown Chart

Sprint 2

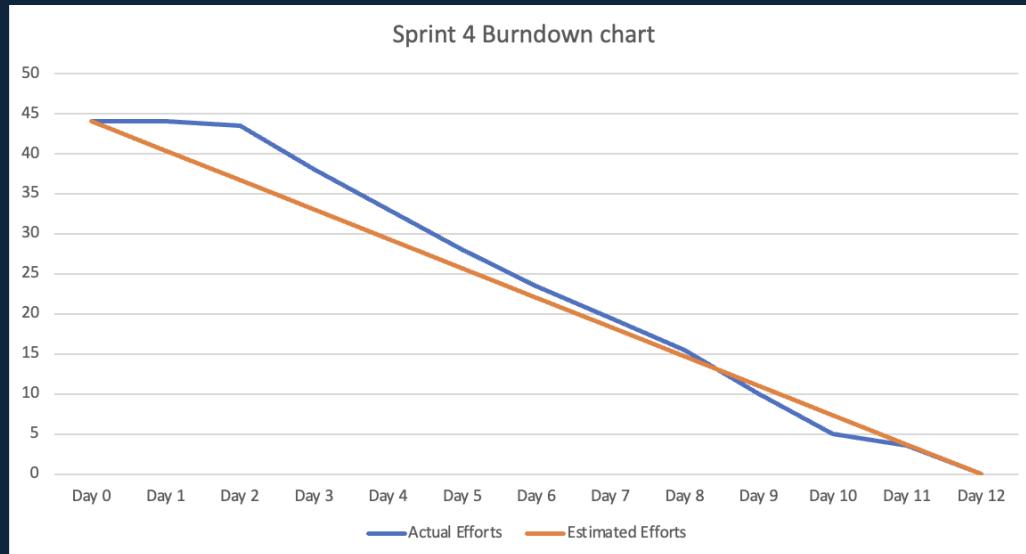


Sprint 3

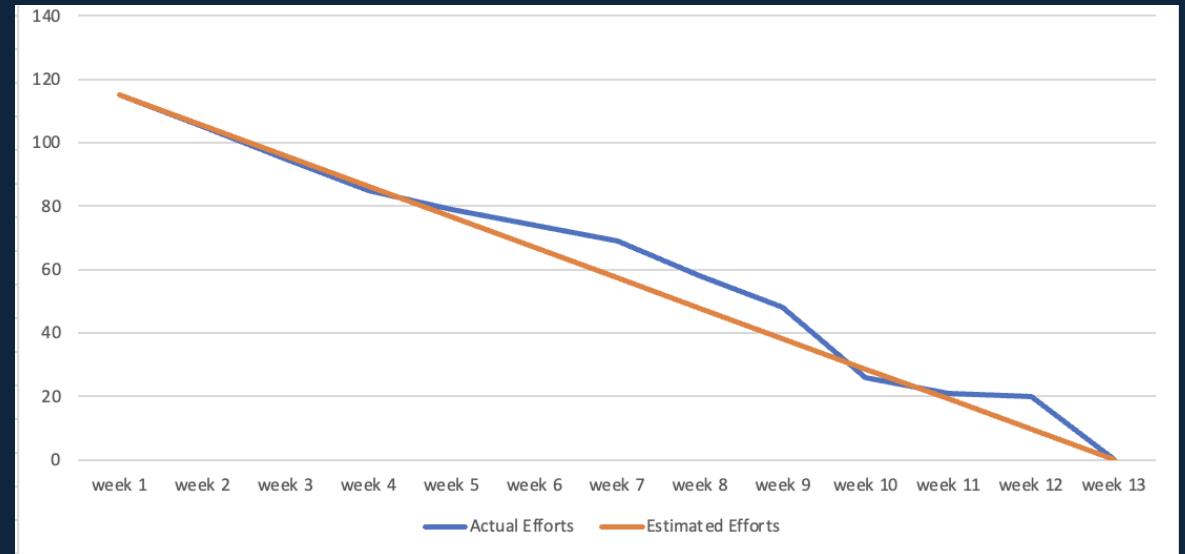


Burndown Chart

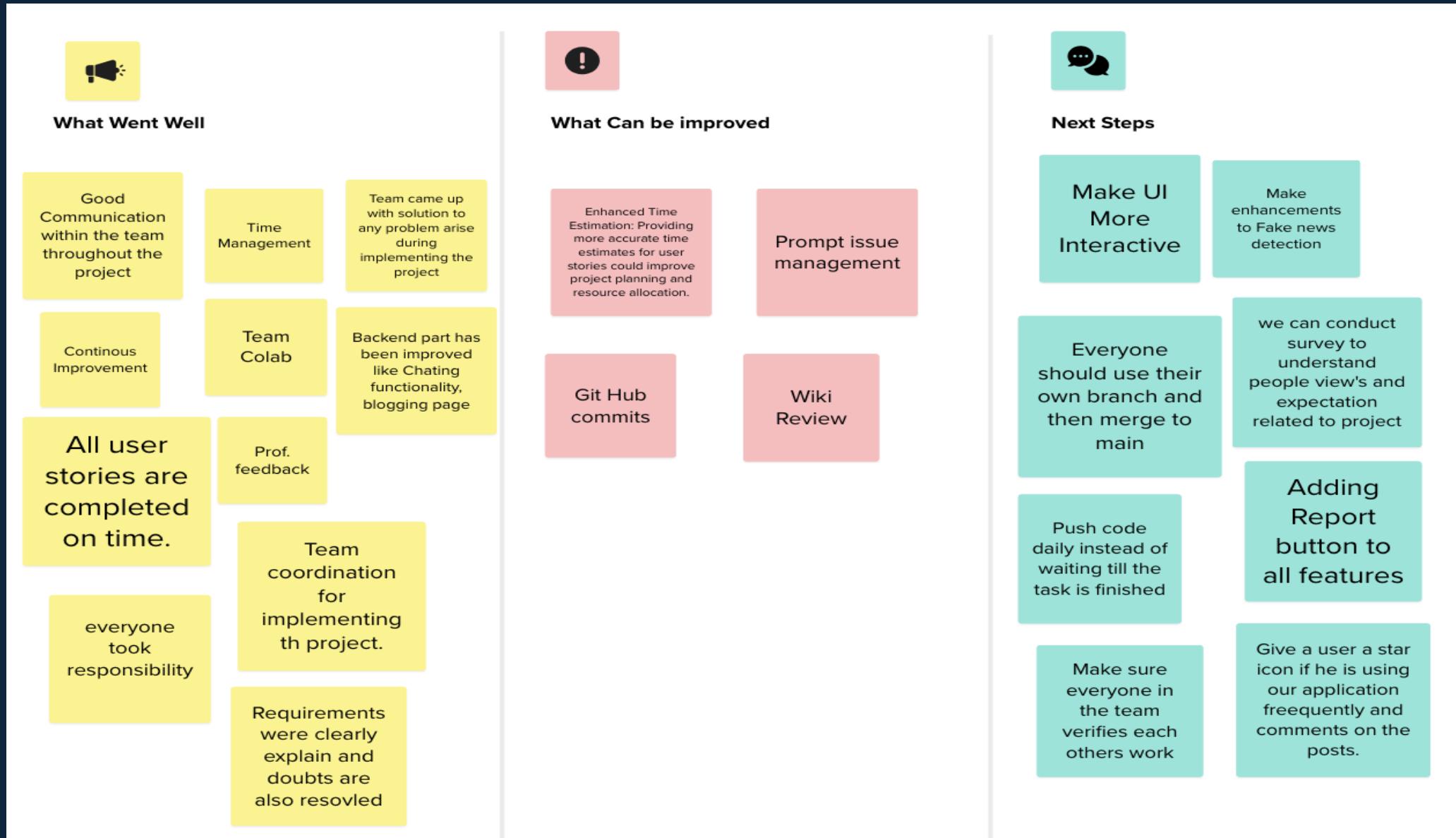
Sprint 4



Average



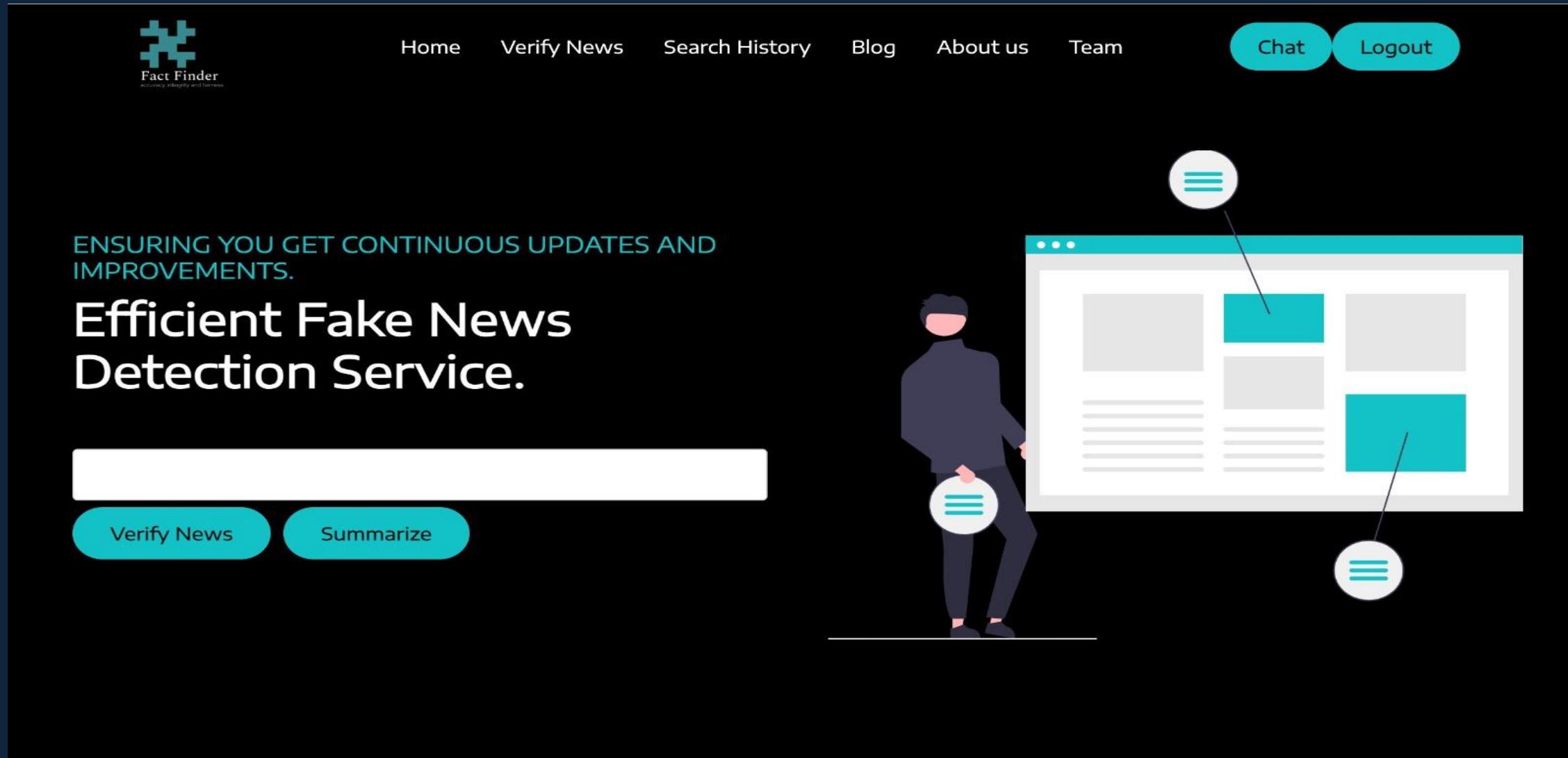
Sprint 4 Retrospective



FactFinder website screenshots:



FactFinder website screenshots:



The screenshot shows the homepage of the FactFinder website. At the top, there is a navigation bar with links for Home, Verify News, Search History, Blog, About us, Team, Chat, and Logout. Below the navigation bar, there is a large teal header with the text "ENSURING YOU GET CONTINUOUS UPDATES AND IMPROVEMENTS." and "Efficient Fake News Detection Service." A person is standing next to a large computer monitor displaying a news article layout with three teal callout bubbles pointing to the menu icon in the top right corner of the screen.

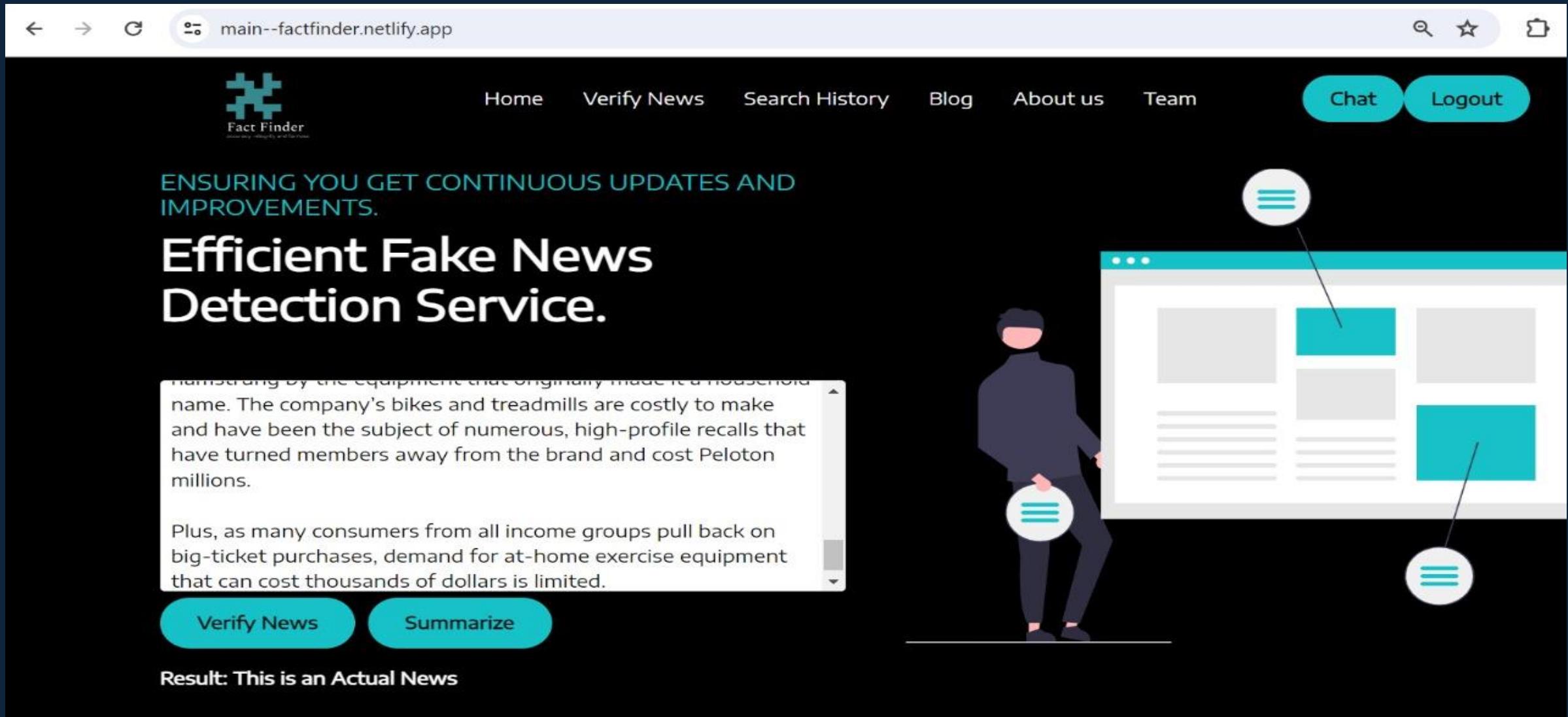
ENSURING YOU GET CONTINUOUS UPDATES AND IMPROVEMENTS.

Efficient Fake News Detection Service.

Verify News Summarize

Home Verify News Search History Blog About us Team Chat Logout

FactFinder website screenshots:



The screenshot shows a web browser displaying the FactFinder website at main--factfinder.netlify.app. The page features a dark header with the Fact Finder logo, navigation links (Home, Verify News, Search History, Blog, About us, Team), and user buttons (Chat, Logout). A teal banner below the header reads "ENSURING YOU GET CONTINUOUS UPDATES AND IMPROVEMENTS." The main content area displays a news article about Peloton. A modal window is open, showing a snippet of the article: "Hamstring by the equipment that originally made it a household name. The company's bikes and treadmills are costly to make and have been the subject of numerous, high-profile recalls that have turned members away from the brand and cost Peloton millions." Below the snippet are two buttons: "Verify News" and "Summarize". To the right, there is a graphic of a person interacting with a large screen displaying a grid of news items, with three circular callout icons pointing to the screen.

main--factfinder.netlify.app

Fact Finder

accuracy, integrity and fairness

Home Verify News Search History Blog About us Team Chat Logout

ENSURING YOU GET CONTINUOUS UPDATES AND IMPROVEMENTS.

Efficient Fake News Detection Service.

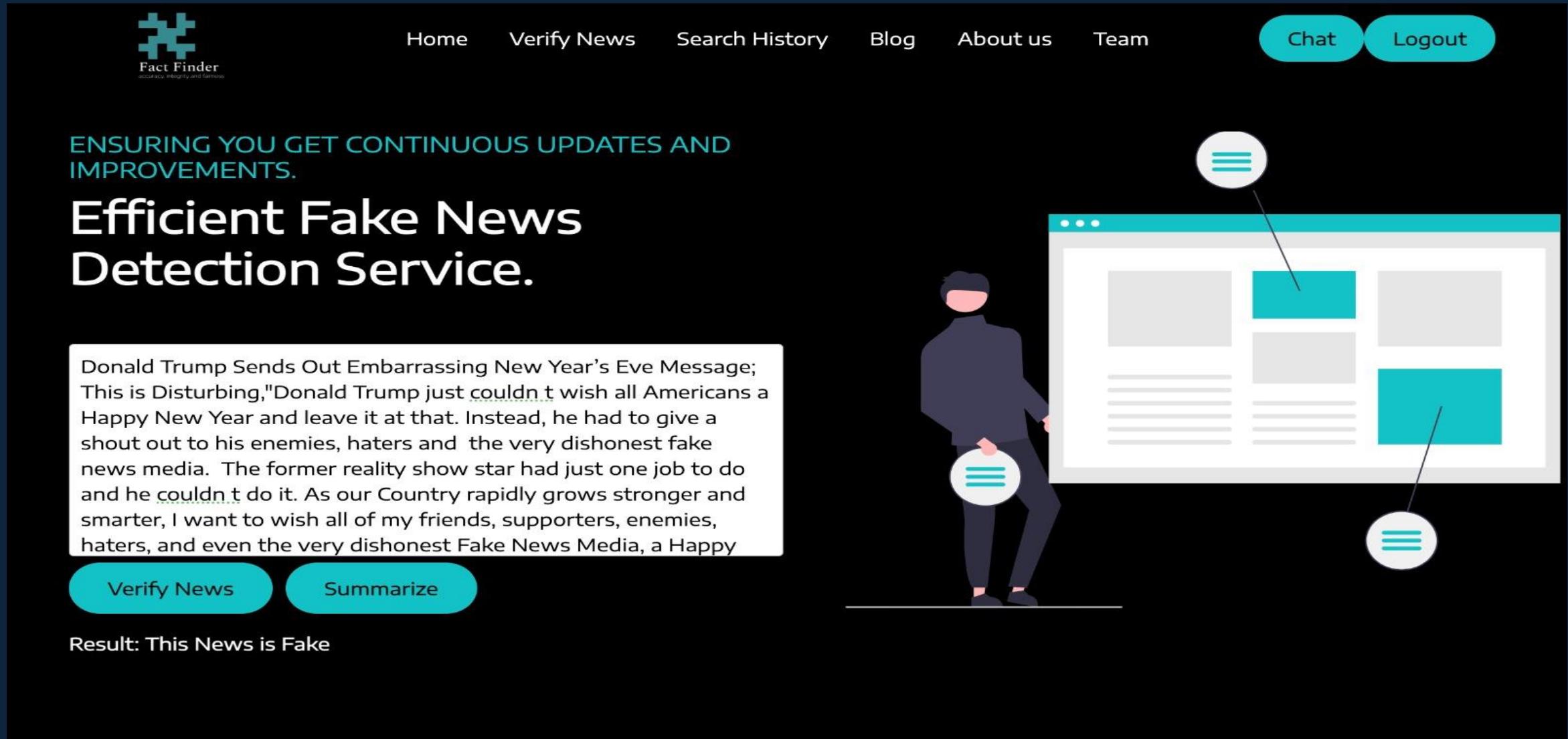
Hamstring by the equipment that originally made it a household name. The company's bikes and treadmills are costly to make and have been the subject of numerous, high-profile recalls that have turned members away from the brand and cost Peloton millions.

Plus, as many consumers from all income groups pull back on big-ticket purchases, demand for at-home exercise equipment that can cost thousands of dollars is limited.

Verify News Summarize

Result: This is an Actual News

FactFinder website screenshots:



The screenshot shows the homepage of the FactFinder website. At the top, there is a navigation bar with links for Home, Verify News, Search History, Blog, About us, Team, Chat, and Logout. Below the navigation bar, there is a large heading "ENSURING YOU GET CONTINUOUS UPDATES AND IMPROVEMENTS." followed by "Efficient Fake News Detection Service." In the center, there is a text box containing a news article about Donald Trump's New Year's Eve message. Below the text box are two buttons: "Verify News" and "Summarize". At the bottom, it says "Result: This News is Fake". To the right of the main content area, there is a graphic of a person holding a smartphone displaying a mobile version of the website. Three callout bubbles point to the three horizontal menu bars (hamburger menus) located at the top of the phone screen.

ENSURING YOU GET CONTINUOUS UPDATES AND IMPROVEMENTS.

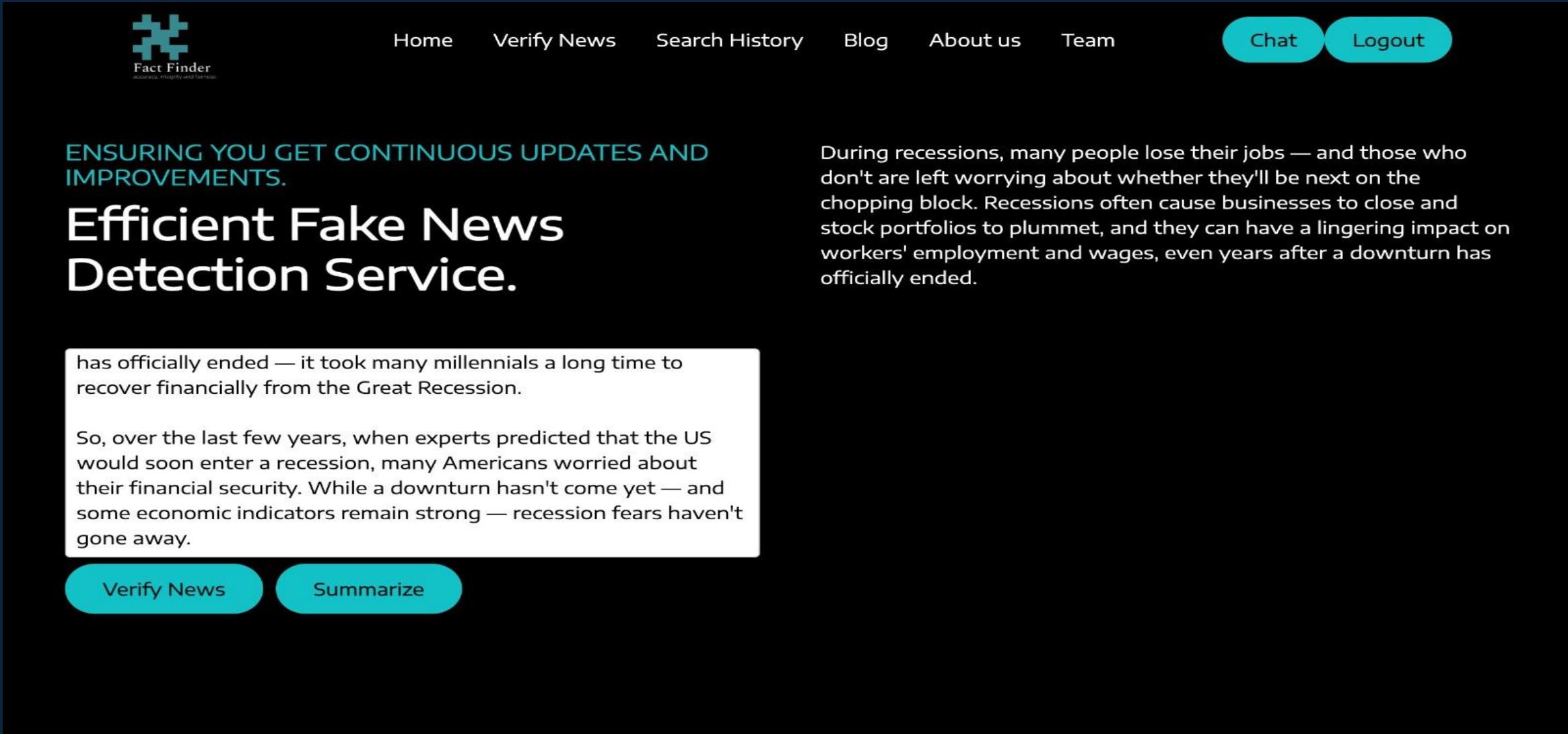
Efficient Fake News Detection Service.

Donald Trump Sends Out Embarrassing New Year's Eve Message; This is Disturbing,"Donald Trump just couldn't wish all Americans a Happy New Year and leave it at that. Instead, he had to give a shout out to his enemies, haters and the very dishonest fake news media. The former reality show star had just one job to do and he couldn't do it. As our Country rapidly grows stronger and smarter, I want to wish all of my friends, supporters, enemies, haters, and even the very dishonest Fake News Media, a Happy

Verify News Summarize

Result: This News is Fake

FactFinder website screenshots:



The screenshot shows the homepage of the FactFinder website. At the top, there is a navigation bar with links for Home, Verify News, Search History, Blog, About us, and Team. To the right of these links are two teal-colored buttons: 'Chat' and 'Logout'. The main content area features a large teal header with the text 'ENSURING YOU GET CONTINUOUS UPDATES AND IMPROVEMENTS.' Below this, there is a large white box containing text about financial recovery from the Great Recession. At the bottom of the page are two teal buttons labeled 'Verify News' and 'Summarize'.

ENSURING YOU GET CONTINUOUS UPDATES AND IMPROVEMENTS.

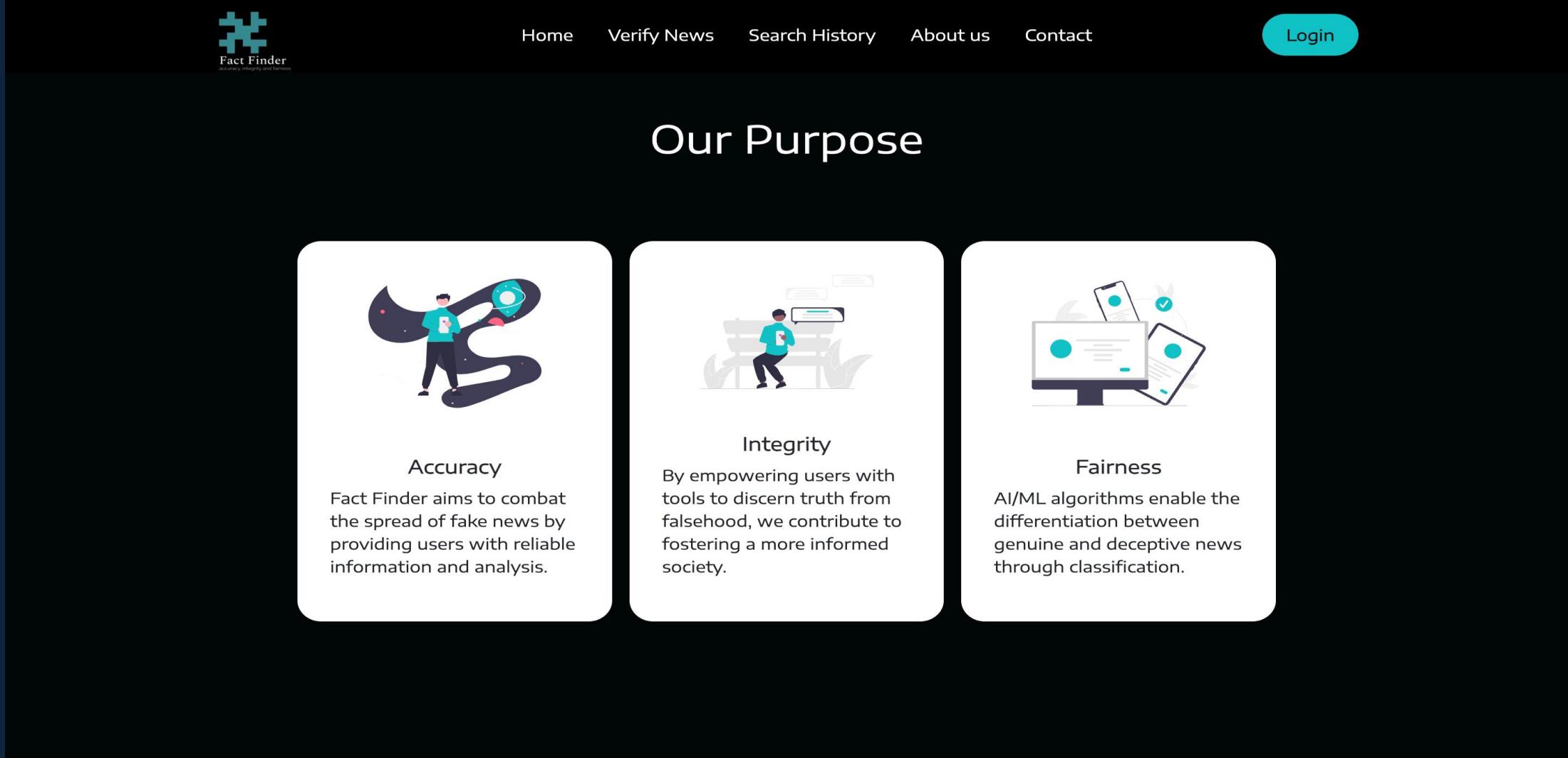
Efficient Fake News Detection Service.

has officially ended — it took many millennials a long time to recover financially from the Great Recession.

So, over the last few years, when experts predicted that the US would soon enter a recession, many Americans worried about their financial security. While a downturn hasn't come yet — and some economic indicators remain strong — recession fears haven't gone away.

[Verify News](#) [Summarize](#)

FactFinder website screenshots:



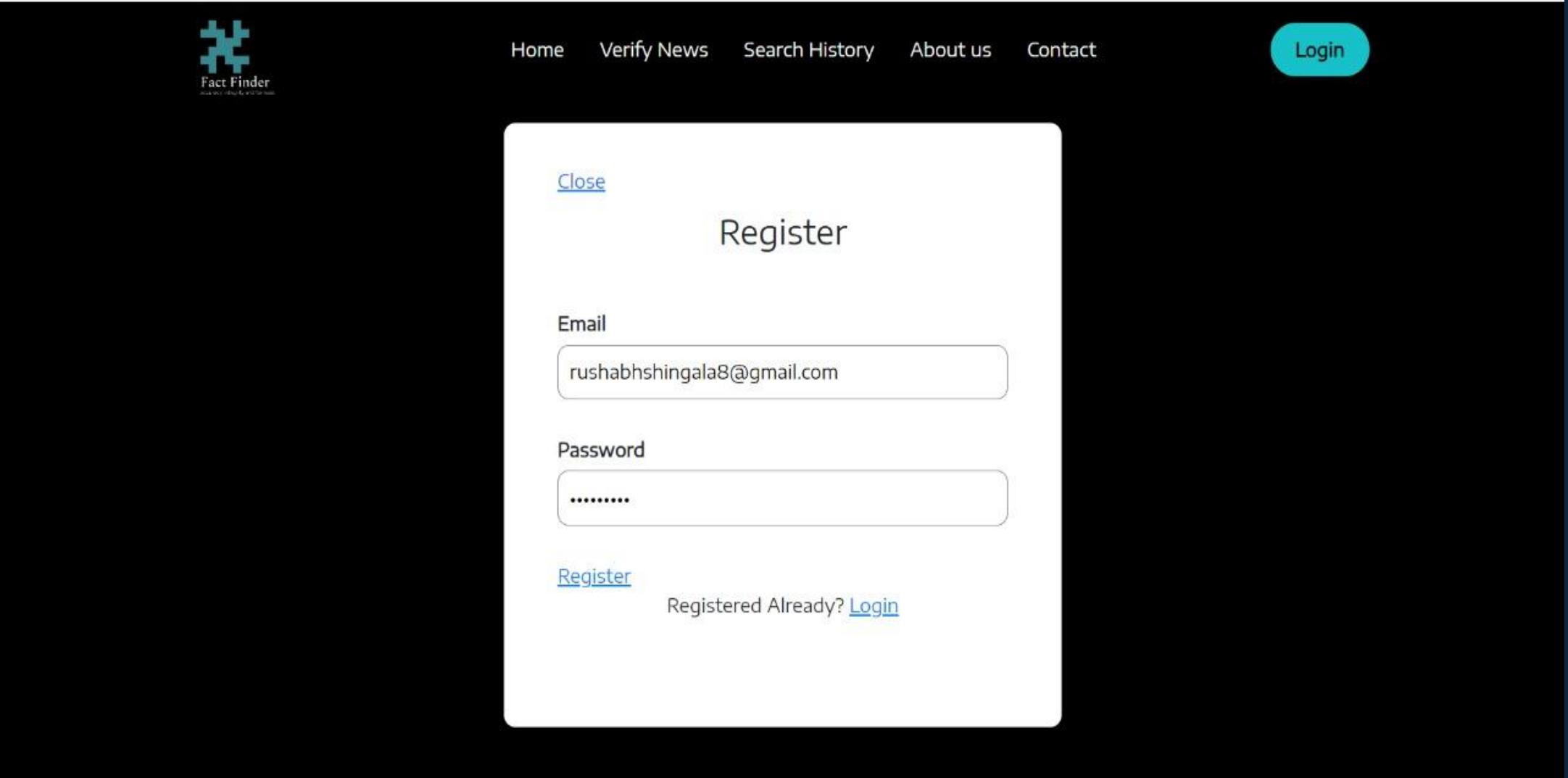
The screenshot shows the FactFinder website's homepage. At the top is a dark header bar with the FactFinder logo on the left and five menu items: Home, Verify News, Search History, About us, and Contact. To the right of these is a teal-colored 'Login' button. Below the header, the main title 'Our Purpose' is centered in a large white font. The page then features three white rectangular cards, each containing an icon and text describing one of the platform's core values: Accuracy, Integrity, and Fairness.

Accuracy
Fact Finder aims to combat the spread of fake news by providing users with reliable information and analysis.

Integrity
By empowering users with tools to discern truth from falsehood, we contribute to fostering a more informed society.

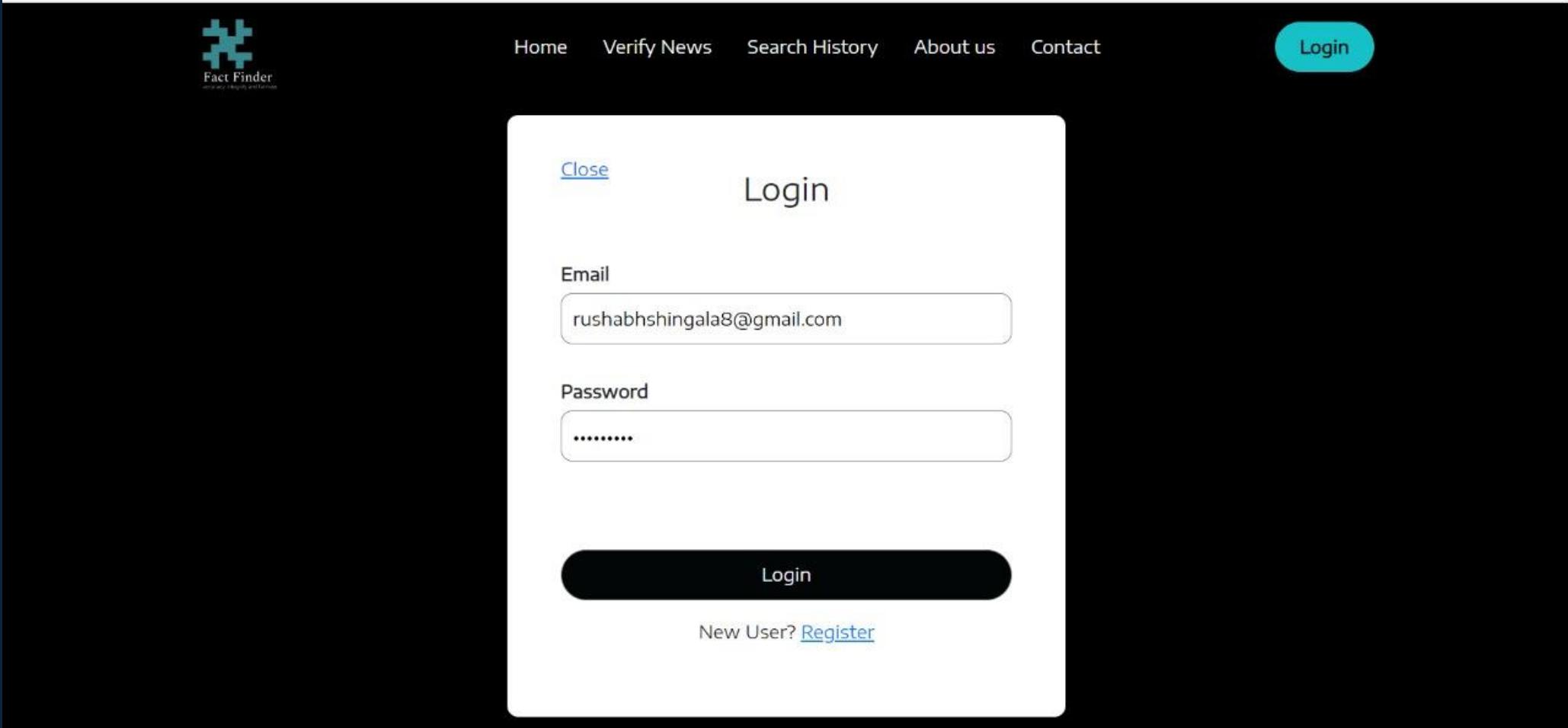
Fairness
AI/ML algorithms enable the differentiation between genuine and deceptive news through classification.

FactFinder website screenshots:



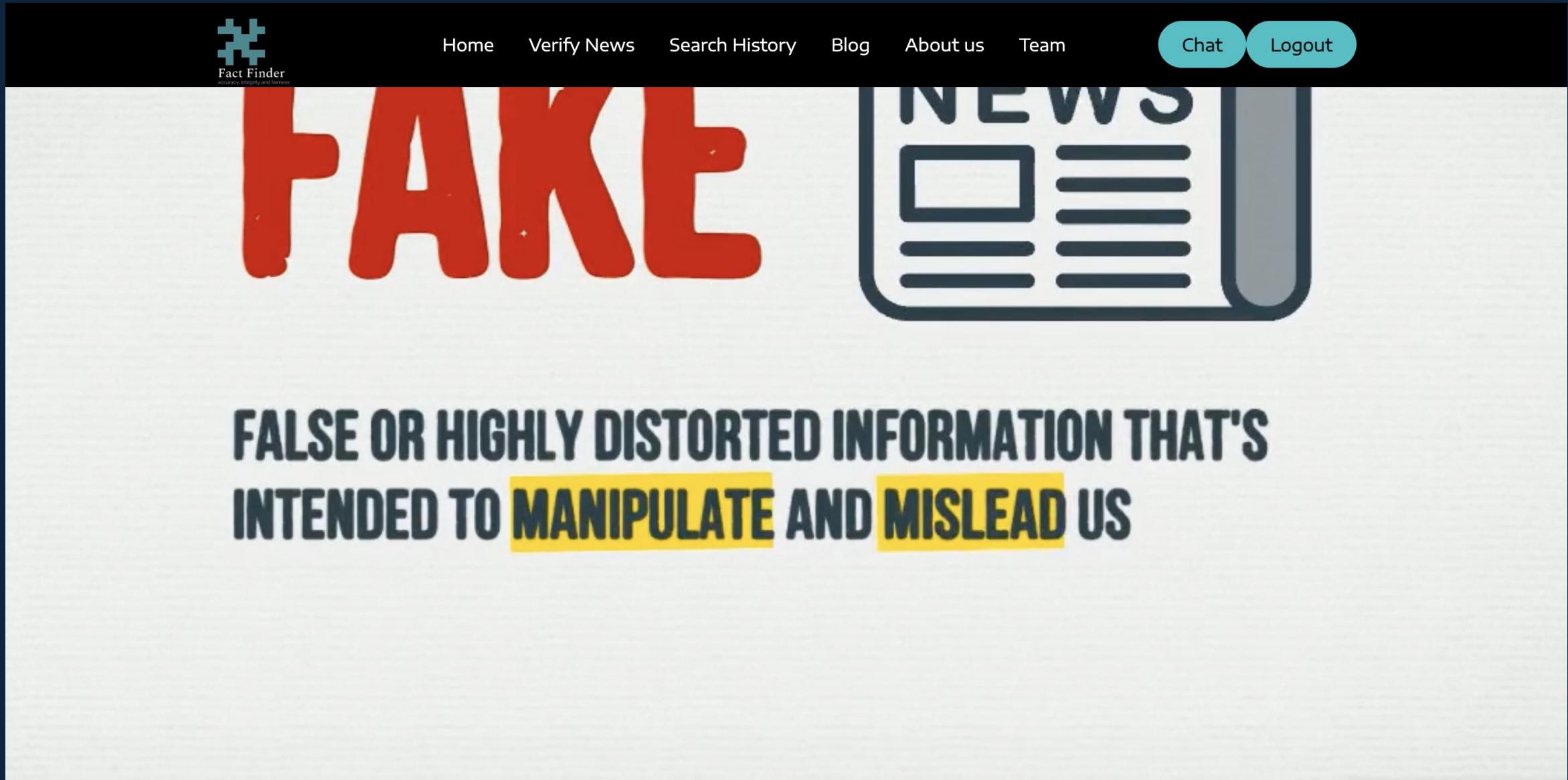
The screenshot shows a dark-themed website for "Fact Finder". At the top, there is a navigation bar with links for Home, Verify News, Search History, About us, Contact, and a prominent blue "Login" button. Below the navigation, a white registration modal is displayed. The modal has a "Close" link at the top left. The title "Register" is centered above two input fields: one for "Email" containing "rushabhshingala8@gmail.com" and one for "Password" containing a series of dots. At the bottom of the modal, there is a blue "Register" link and a link "Registered Already? [Login](#)".

FactFinder website screenshots:



The screenshot shows a dark-themed website for "Fact Finder". At the top, there is a navigation bar with links: Home, Verify News, Search History, About us, Contact, and a prominent blue "Login" button. Below the navigation bar is a modal window titled "Login". The modal contains fields for "Email" (with the value "rushabhshingala8@gmail.com") and "Password" (represented by a series of dots). At the bottom of the modal is a large black "Login" button. Below the modal, the text "New User? [Register](#)" is visible.

FactFinder website screenshots:



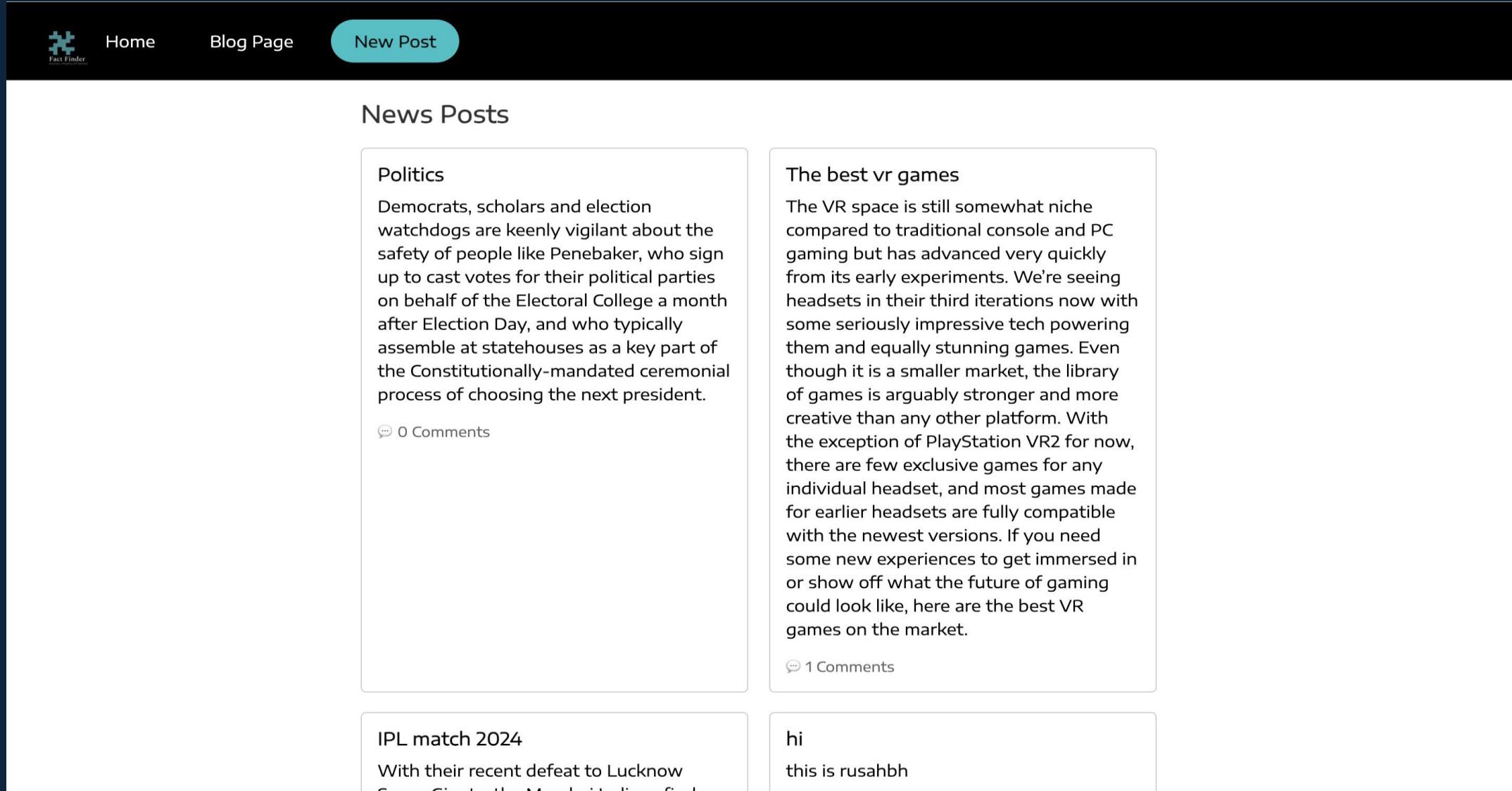
The screenshot shows a web page with a dark blue header. The header contains the Fact Finder logo, a navigation menu with links to Home, Verify News, Search History, Blog, About us, and Team, and two buttons for Chat and Logout. Below the header, the word "FAKE" is written in large red letters. To the right of "FAKE" is a graphic of a newspaper with the word "NEWS" at the top. Below this, the text reads: "FALSE OR HIGHLY DISTORTED INFORMATION THAT'S INTENDED TO MANIPULATE AND MISLEAD US".

Home Verify News Search History Blog About us Team Chat Logout

FAKE NEWS

FALSE OR HIGHLY DISTORTED INFORMATION THAT'S INTENDED TO MANIPULATE AND MISLEAD US

FactFinder website screenshots:



The screenshot displays a website interface with a dark blue header and a white content area. The header features the Fact Finder logo, a navigation bar with 'Home' and 'Blog Page' links, and a prominent 'New Post' button. Below the header, the title 'News Posts' is centered above two news card components.

Politics

Democrats, scholars and election watchdogs are keenly vigilant about the safety of people like Penebaker, who sign up to cast votes for their political parties on behalf of the Electoral College a month after Election Day, and who typically assemble at statehouses as a key part of the Constitutionally-mandated ceremonial process of choosing the next president.

0 Comments

The best vr games

The VR space is still somewhat niche compared to traditional console and PC gaming but has advanced very quickly from its early experiments. We're seeing headsets in their third iterations now with some seriously impressive tech powering them and equally stunning games. Even though it is a smaller market, the library of games is arguably stronger and more creative than any other platform. With the exception of PlayStation VR2 for now, there are few exclusive games for any individual headset, and most games made for earlier headsets are fully compatible with the newest versions. If you need some new experiences to get immersed in or show off what the future of gaming could look like, here are the best VR games on the market.

1 Comments

IPL match 2024

With their recent defeat to Lucknow Super Giants, the Mumbai Indians find

hi

this is rusahbh

FactFinder website screenshots:



Home

Blog Page

Politics

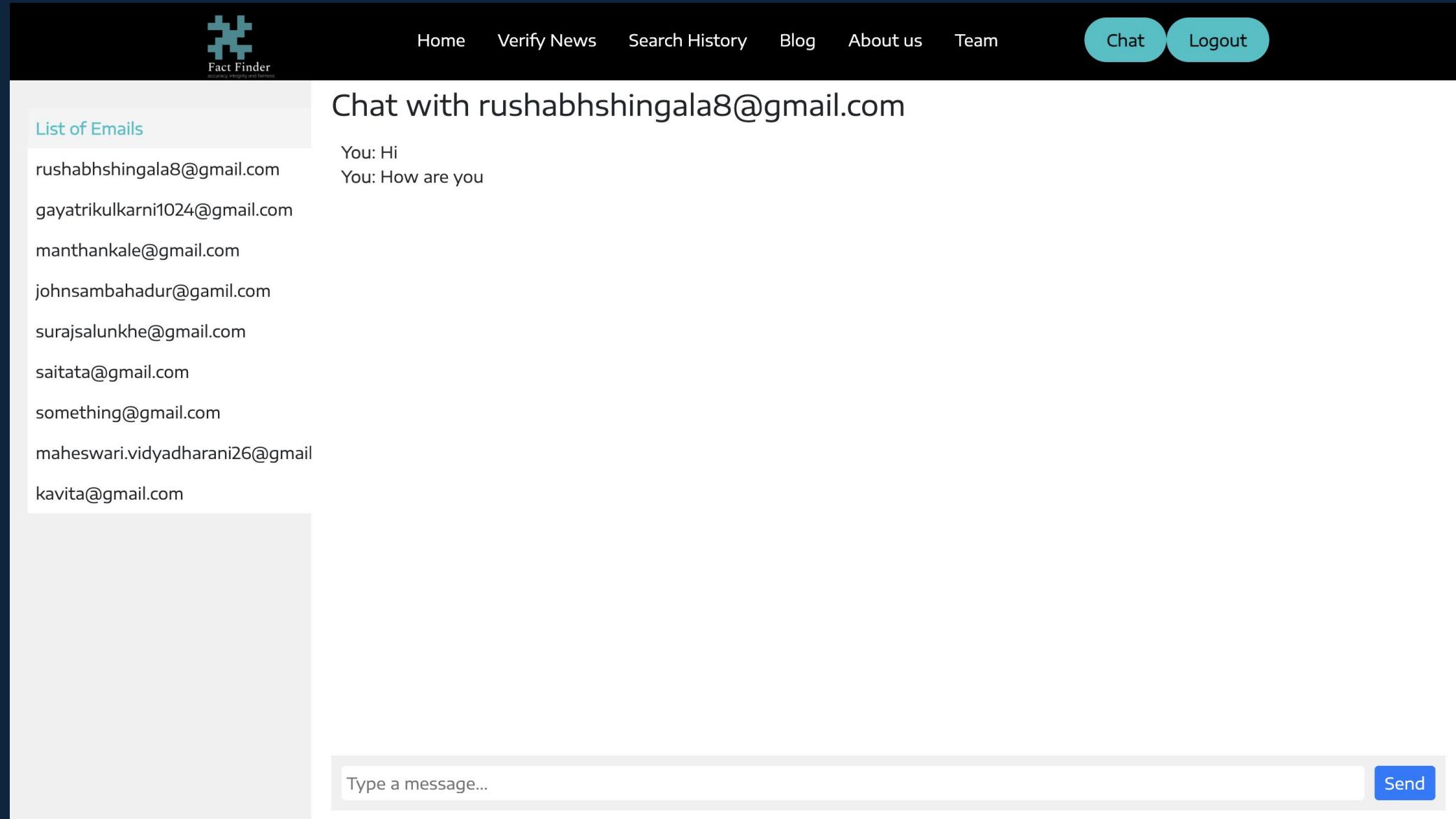
Democrats, scholars and election watchdogs are keenly vigilant about the safety of people like Penebaker, who sign up to cast votes for their political parties on behalf of the Electoral College a month after Election Day, and who typically assemble at statehouses as a key part of the Constitutionally-mandated ceremonial process of choosing the next president.

Write a comment...

Submit Comment

Comments:

FactFinder website screenshots:



The screenshot shows a web-based chat interface. At the top, there is a navigation bar with links: Home, Verify News, Search History, Blog, About us, Team, Chat (highlighted in a teal circle), and Logout. On the left, a sidebar titled "List of Emails" displays a list of email addresses. The main area shows a conversation with the email address "rushabhshingala8@gmail.com". The messages are as follows:

- You: Hi
- You: How are you

At the bottom, there is a text input field with the placeholder "Type a message..." and a blue "Send" button.

- rushabhshingala8@gmail.com
- gayatrikulkarni1024@gmail.com
- manthankale@gmail.com
- johnsambahadur@gamil.com
- surajsalunkhe@gmail.com
- saitata@gmail.com
- something@gmail.com
- maheswari.vidyadharani26@gmail
- kavita@gmail.com

FactFinder website screenshots:

The screenshot shows the 'Our Team' section of the FactFinder website. At the top, there is a navigation bar with links for Home, Verify News, About us, Team, and Login. Below the navigation bar, the page title 'Our Team' is centered. Four team members are introduced with their profile pictures, names, titles, brief descriptions, and LinkedIn links.

Sai Tata
Software Engineer
I'm a software engineer enthusiast who loves to learn and explore new technology.
[LinkedIn](#)

Rushabh Shingala
I'm a software engineer to Passionate about building web solutions with ASP.NET and MVC.
[LinkedIn](#)

Saurabh Chaudhary
I'm an software engineer with a passion for learning and exploring new technologies especially working on backend.
[LinkedIn](#)

Kavita Kamtekar
I'm an enthusiastic software engineer who thrives on learning about cutting-edge technologies and diving deep into their exploration.
[LinkedIn](#)

FactFinder website screenshots:



The header features a dark blue background with the Fact Finder logo at the top left. To its right are four menu items: "Home", "Verify News", "About us", and "Team". On the far right is a teal-colored "Login" button.

I'm a software engineer enthusiast who loves to learn and explore new technology.

[LinkedIn](#)



Maheshwari Vidyadharani

I'm an enthusiastic software engineer with a passion for learning and exploring new technologies.

[LinkedIn](#)

I'm a software engineer to Passionate about building web solutions with ASP.NET and MVC.

[LinkedIn](#)



Manthan Kale

I am software Engineer, I enjoy solving difficult problems and give accurate outcomes.

[LinkedIn](#)

I'm an software engineer with a passion for learning and exploring new technologies especially working on backend.

[LinkedIn](#)



Suraj Salunkhe

"I am software Engineer, who is achieving function while avoiding failure.

[LinkedIn](#)

engineer who thrives on learning about cutting-edge technologies and diving deep into their exploration.

[LinkedIn](#)



Gayatri Kulkarni

I am software engineer, I follows my passion to build and learn more about technologies.

[LinkedIn](#)

API

We used Flask Framework to create the REST API for our application.
We created three end-points process, summarize and main to return user's POST request.

The process function takes user's input in JSON format, clean the unnecessary words using our clean function, use our trained model and return whether the news is fake or real.

```
28     app = Flask(__name__)
29
30
31
32
33     @app.route('/')
34     def index():
35         return render_template('index.html')
36
37     @app.route('/process', methods=['POST'])
38     def process():
39         if request.method == 'POST':
40             data = request.json['data']
41
42
43             result = prediction(data)
44             return result
45
46
47     def prediction(data):
48         news_data = {'news_to_predict': [data]}
49         df_news = pd.DataFrame(news_data)
50         df_news['news_to_predict'] = df_news['news_to_predict'].apply(clean_and_lower)
51         news_X_test = df_news['news_to_predict']
52         news_X_test = vectorization.transform(news_X_test)
53         result = model.predict(news_X_test)
54
55
56
57         if result[0] == 1:
58
59             return "This News is Fake"
60         else:
61             return "This is an Actual News"
```

API (Cont..)

```
47 def prediction(data):
48     news_data = {'news_to_predict': [data]}
49     df_news = pd.DataFrame(news_data)
50     df_news['news_to_predict'] = df_news['news_to_predict'].apply(clean_and_lower)
51     news_X_test = df_news['news_to_predict']
52     news_X_test = vectorization.transform(news_X_test)
53     result = model.predict(news_X_test)
54
55
56
57     if result[0] == 1:
58
59         return "This News is Fake"
60     else:
61
62         return "This is an Actual News"
63
64 if __name__ == '__main__':
65     app.run(debug=True)
66
67
68 print("all done main.py")
```

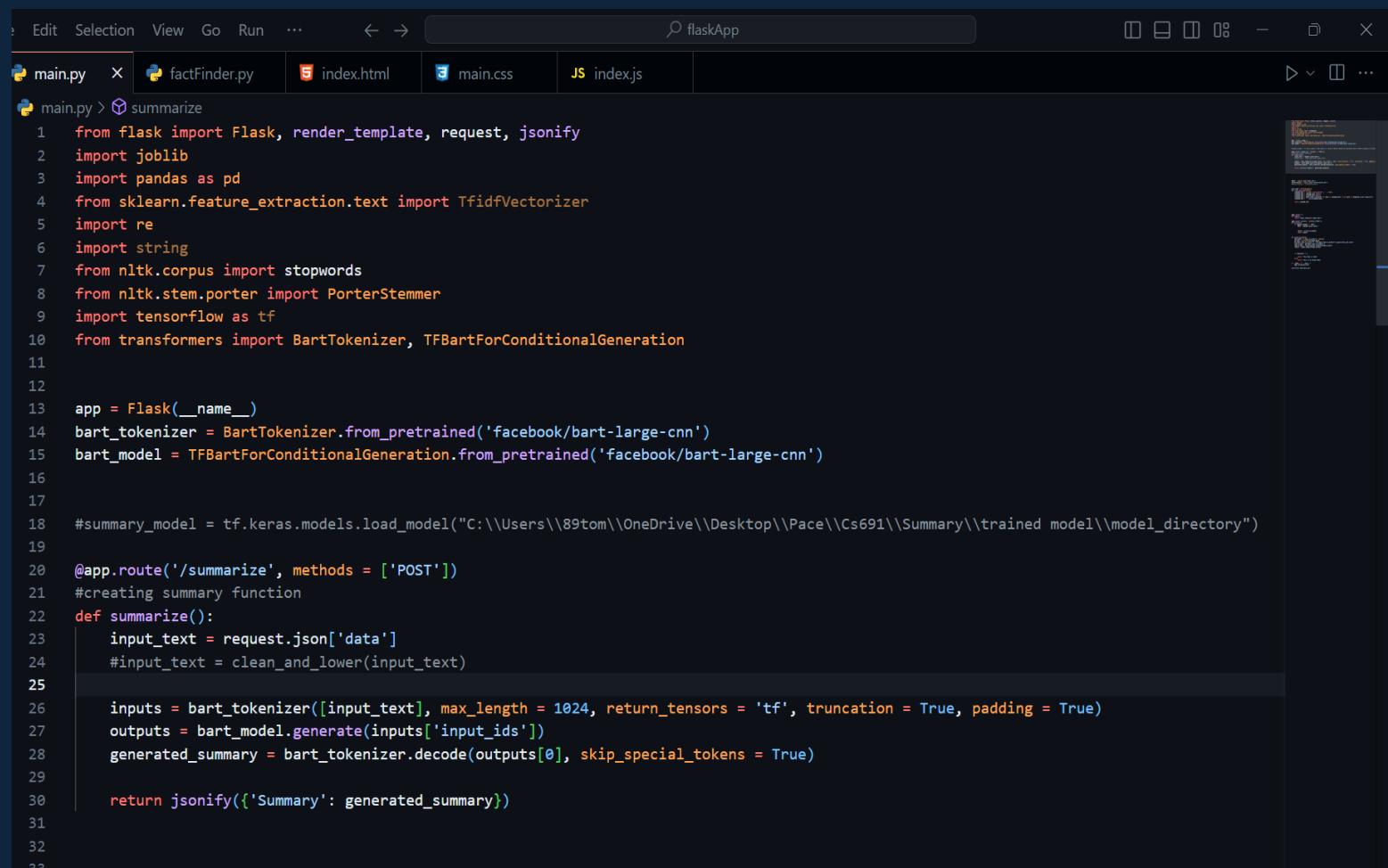
API (Cont..)

To create summary out of the news the summarize function take user's input as JSON as an argument.

Create input token of the input data.

Generate output token using the pre-trained model.

And decode the output token into text and return to user as JSON format where the JSON format converted back to text using JavaScript.



```

  Edit Selection View Go Run ... ⏪ ⏩ flakApp
main.py x factFinder.py index.html main.css index.js
main.py > summarize
1  from flask import Flask, render_template, request, jsonify
2  import joblib
3  import pandas as pd
4  from sklearn.feature_extraction.text import TfidfVectorizer
5  import re
6  import string
7  from nltk.corpus import stopwords
8  from nltk.stem.porter import PorterStemmer
9  import tensorflow as tf
10 from transformers import BartTokenizer, TFBartForConditionalGeneration
11
12
13 app = Flask(__name__)
14 bart_tokenizer = BartTokenizer.from_pretrained('facebook/bart-large-cnn')
15 bart_model = TFBartForConditionalGeneration.from_pretrained('facebook/bart-large-cnn')
16
17
18 #summary_model = tf.keras.models.load_model("C:\\\\Users\\\\89tom\\\\OneDrive\\\\Desktop\\\\Pace\\\\Cs691\\\\Summary\\\\trained model\\\\model_directory")
19
20 @app.route('/summarize', methods = ['POST'])
21 #creating summary function
22 def summarize():
23     input_text = request.json['data']
24     #input_text = clean_and_lower(input_text)
25
26     inputs = bart_tokenizer([input_text], max_length = 1024, return_tensors = 'tf', truncation = True, padding = True)
27     outputs = bart_model.generate(inputs['input_ids'])
28     generated_summary = bart_tokenizer.decode(outputs[0], skip_special_tokens = True)
29
30     return jsonify({'Summary': generated_summary})
31
32
33

```

Git Hub link:

Wiki

<https://github.com/htmw/2024S-JusticeLeague/wiki>

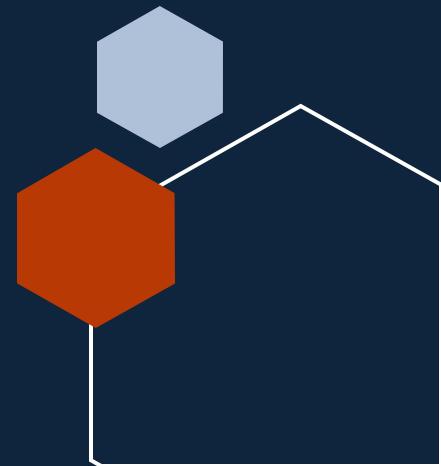
Source code:

https://github.com/htmw/2024S-JusticeLeague/tree/main/source_code



Live Application Demo

Final MVP Demo Link





Thank you

Team Justice League

