

VERIFAKE.COM

DEFENDING REALITY FROM DIGITAL DECEPTION

MOBCIPHER
REG NO: 569

AGENDA

01 INTRODUCTION

02 PROBLEM STATEMENT

03 SOLUTION

04 ANALYSIS

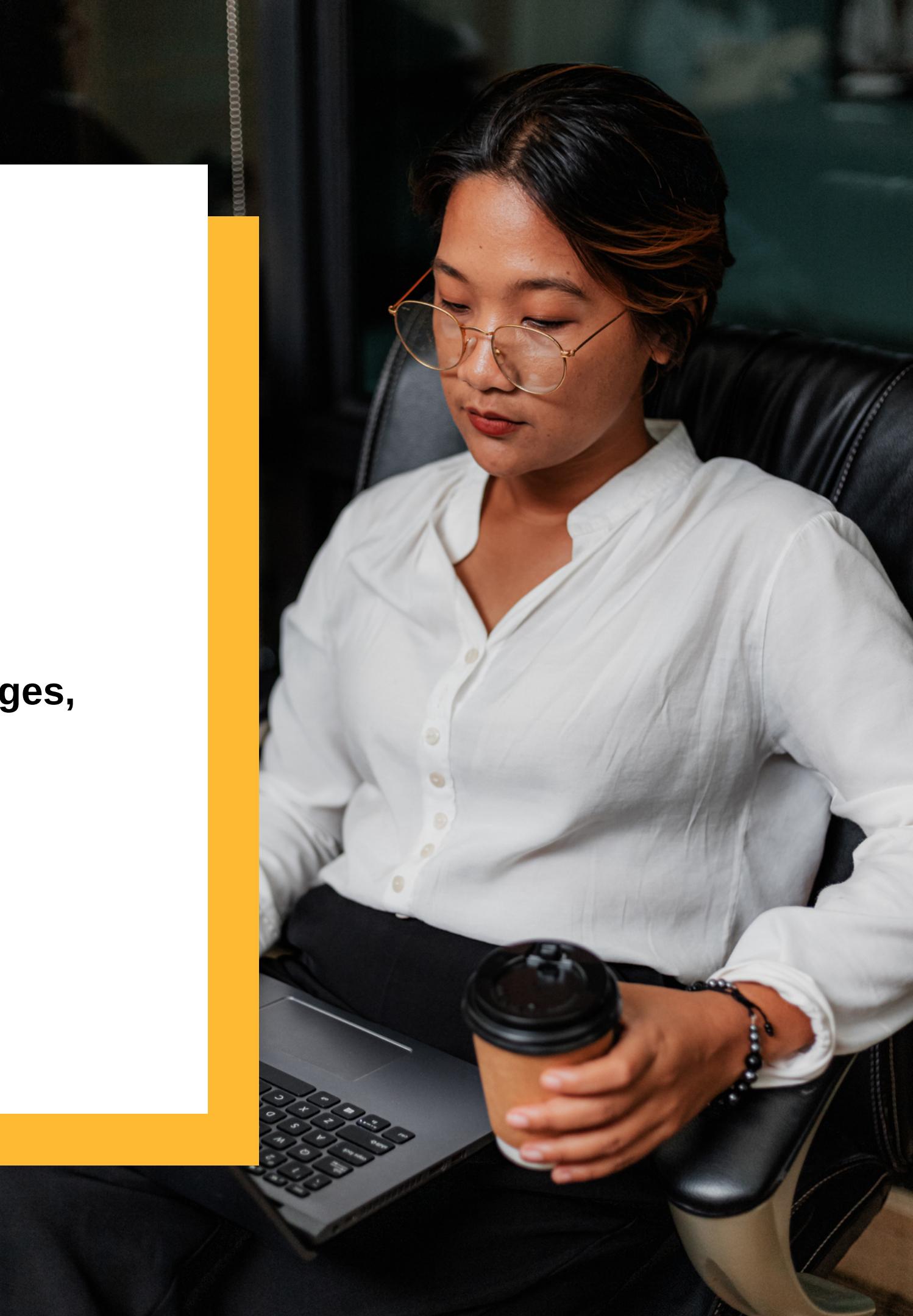
05 SCALABILITY

06 FUTURE SCOPE

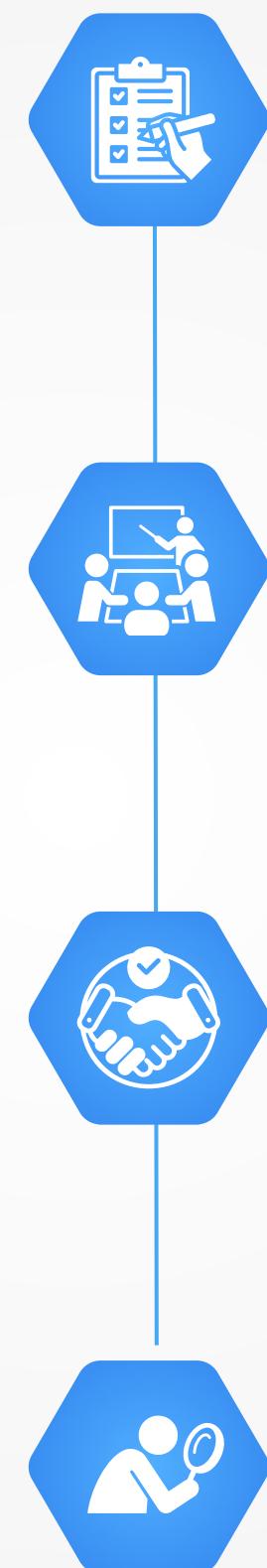


INTRODUCTION

Deepfake, short for "deep learning fake," refers to the sophisticated application of artificial intelligence, particularly deep learning algorithms, to create manipulated or synthetic content, such as images, videos, or audio, that convincingly replicates the appearance and behavior of real individuals.



PROBLEM ANALYSIS



INCREASING DEEPFAKES

DUE TO VARIOUS TYPES OF TOOLS AND SOFTWARES AVAILABLE FOR CREATING DEEPFAKES , ONE HAS GREATER POWER IN PROVIDING MIS-INFORMATION

THREAT TO TRUST

UNDERMINING THE AUTHENCITY OF DIGITAL CONTENT AND ERDOING CONFIDENCE IN THE VERACITY OF MEDIA

LACK OF AWARENESS

NOT BEING AWARE ABOUT THE MIS-INFORMATION AND FRAUDULENT ACTIVITIES OFTEN PUTS A PERSON AT RISK

Ethical and Legal Implications

NAVIGATING ISSUES SUCH AS PRIVACY CONCERNs, POTENTIAL MISUSE AND ADHERENCE TO REGULATIONS .

HOW ARE WE SOLVING THE PROBLEM



DEEPCODET DETECTOR



AWARENESS



MULTIMEDIA SUPPORT



COMMUNITY

WHEN CAN YOU USE VERIFAKE?

1

FACT CHECK

Our solution seamlessly integrates with existing systems, eliminating the need for complex integrations and ensuring a smooth transition for our clients.

2

GAIN KNOWLEGDE

Gain valuable insights through our advanced analytics capabilities, enabling data-driven decision-making and identifying growth opportunities.

3

NEWS UPDATES

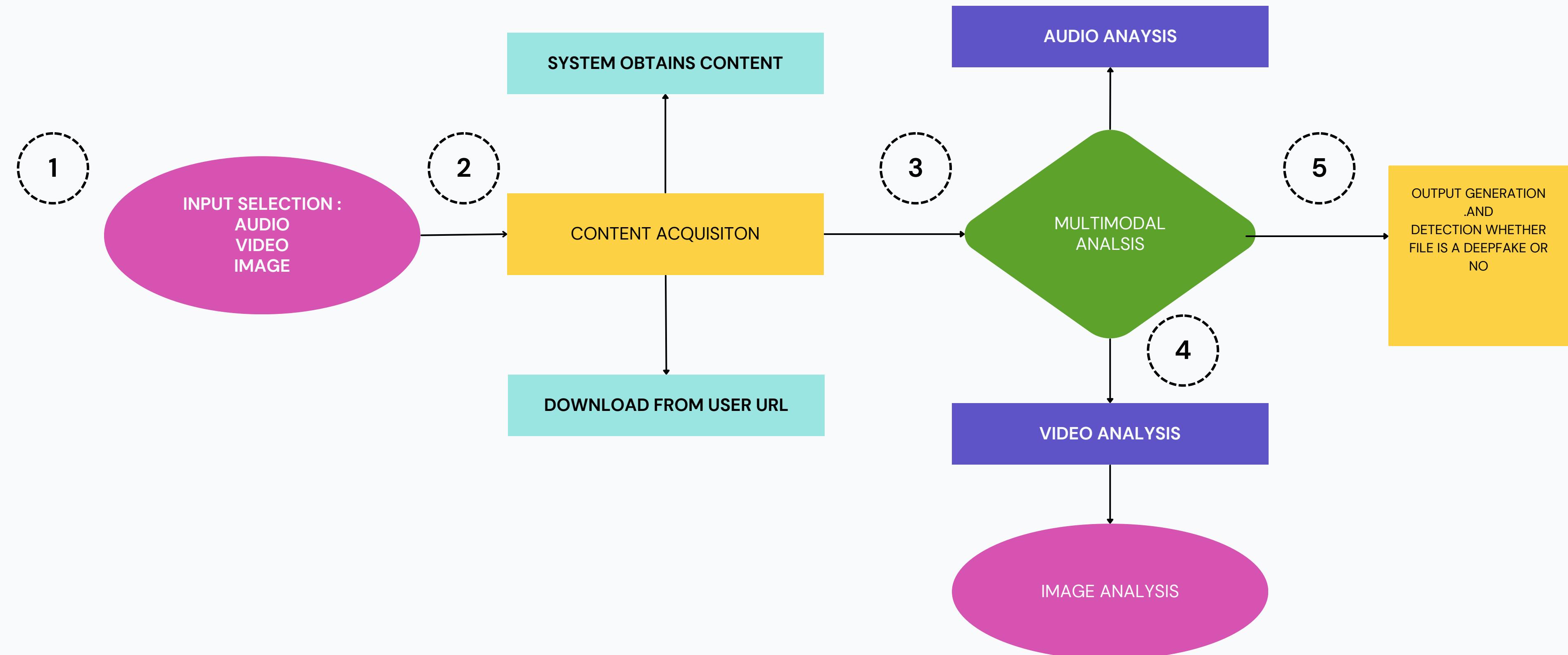
Our platform prioritizes data security, employing robust encryption and proactive measures to safeguard sensitive information.

4

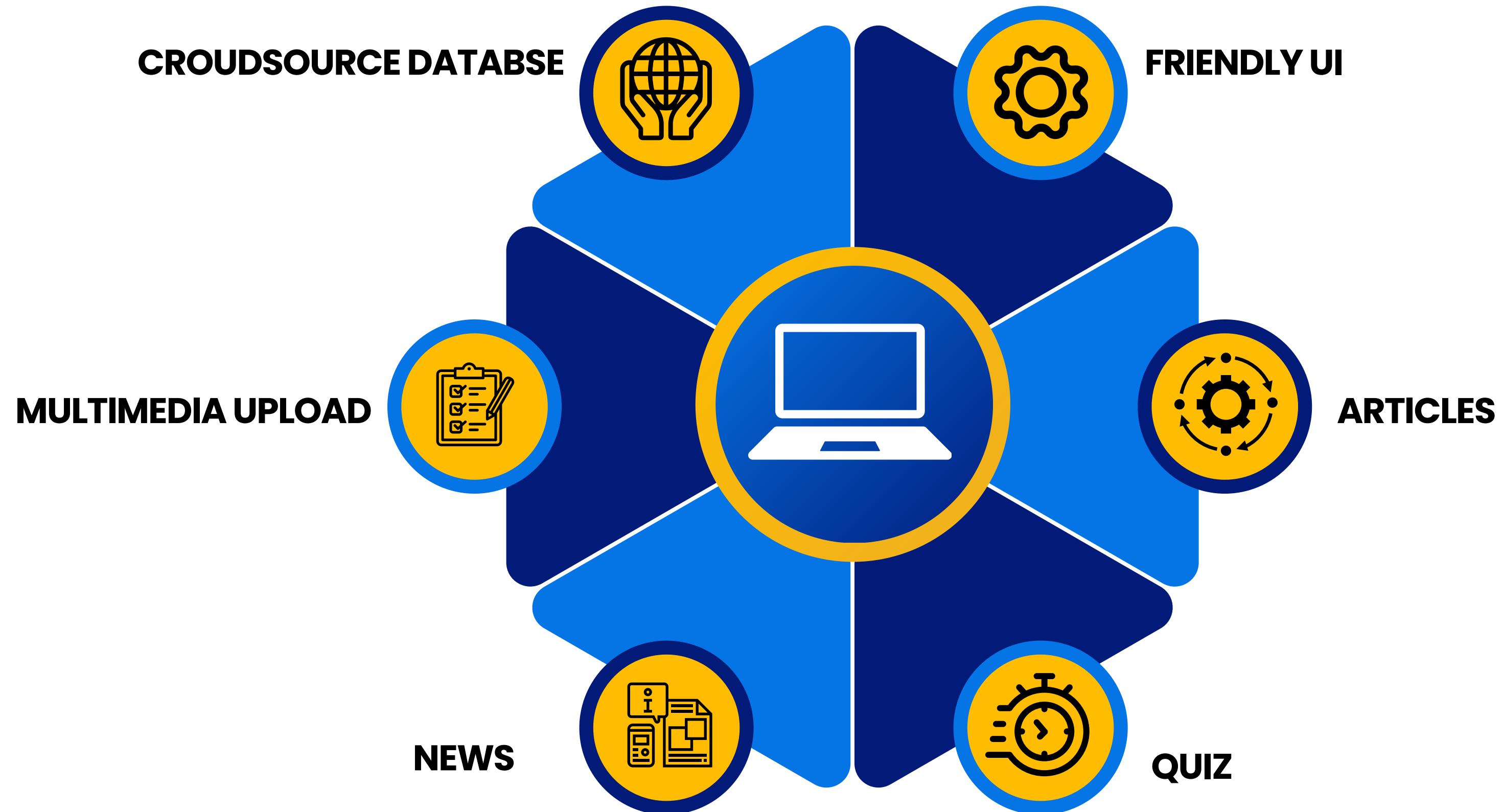
COMMUNITY SUPPORT

With scalability at its core, our solution adapts to the evolving needs of businesses, accommodating growth and offering flexible customization options.

FLOWCHART



FRONTEND ELEMENTS





Verifake

About Blog Contact

Get Started

Truth Revealed

Uncover the Truth: Real or Fake? Discover the Power of Knowledge!

Explore More

Deepfake Check - Upload Files

Upload Image

Choose Image:

Select image

Browse

Upload

Reset

Upload Video

Choose Video:

Select video

Browse

Upload

Reset

Upload Audio

Choose Audio:

Select audio

Browse

Upload

Reset

By uploading files, you agree to the [Terms and Conditions](#).

Recent Deepfake News



Government Crackdown

The Indian government is planning to introduce regulations for deepfakes within 7-10 days, requiring social media platforms to take down harmful content and users to report violations easily. This follows concerns about misinformation and potential misuse during elections.

[→ Learn More](#)



Financial Scams

A new report from the New York Times highlights the rise of voice deepfakes in financial scams. Scammers are impersonating executives or bank personnel to trick victims into transferring money. This raises anxieties about future vulnerabilities in financial systems.

[→ Learn More](#)



Deepfake 'Celebrities'

Taylor Swift fans were targeted by deepfake ads promoting cookware brand Le Creuset. These realistic videos illustrate the potential for impersonation and deceptive marketing.

Deepfake Quiz

Can deepfakes be used for anything good?

No, they are always harmful

Yes, for educational and entertainment purposes

[Next Question](#)

Crowdsourced Deepfake Database

Deepfake URL

Category

Face Swap

 Submit Deepfake

COMMUNITY ENGAGEMENT

Deep fake Detectors

bollywood-and-sports

Events

bollywood-and-sp...  

current-deepfake-news

latest-trends

deepfake-detection-tools

ethics-and-impact

research-and-developm...

events-and-webinars

help-and-support

TEXT CHANNELS 

general

VOICE CHANNELS 

General

Athira Yesterday at 09:25
<https://timesofindia.indiatimes.com/videos/etimes/bollywood/sachin-tendulkars-deepfake-video-goes-viral-cricketers-strong-reaction/videoshow/106870389.cms>

The Times of India

Sachin Tendulkar's deepfake video goes viral; cricketer's strong re...

Cricket icon Sachin Tendulkar has become the latest celebrity to be targeted by deepfake technology, with a video circulating on social media featuring him endorsing a gaming app and falsely claiming financial benefits for his daughter, Sara. Here's how the cricketer reacted!

SACHIN'S VIRAL DEEPFAKE VIDEO 



<https://www.bbc.com/news/entertainment-arts-67726019>

+  Message #bollywood-and-sports

 Athira  

findia.indiatimes.com/photo/msid-106870389,imgsize-864625.cms

COMMUNITY PERKS

KNOWING CURRENT NEWS ABOUT
DEEPCODE

01



DISCUSSIONS, FORUMS

02



NEW TRENDS IN TOOLS
AND TECH

03



SHARING UPDATES ,
REACTION TO POSTS

04



BACKEND ELEMENTS

SETUP
FLASK
APP

IMPORTING
NECESSARY
LIBRARIES

FEATURE
EXTRACTION

PREDICTION

DEFINING
ROUTE
HANDLING

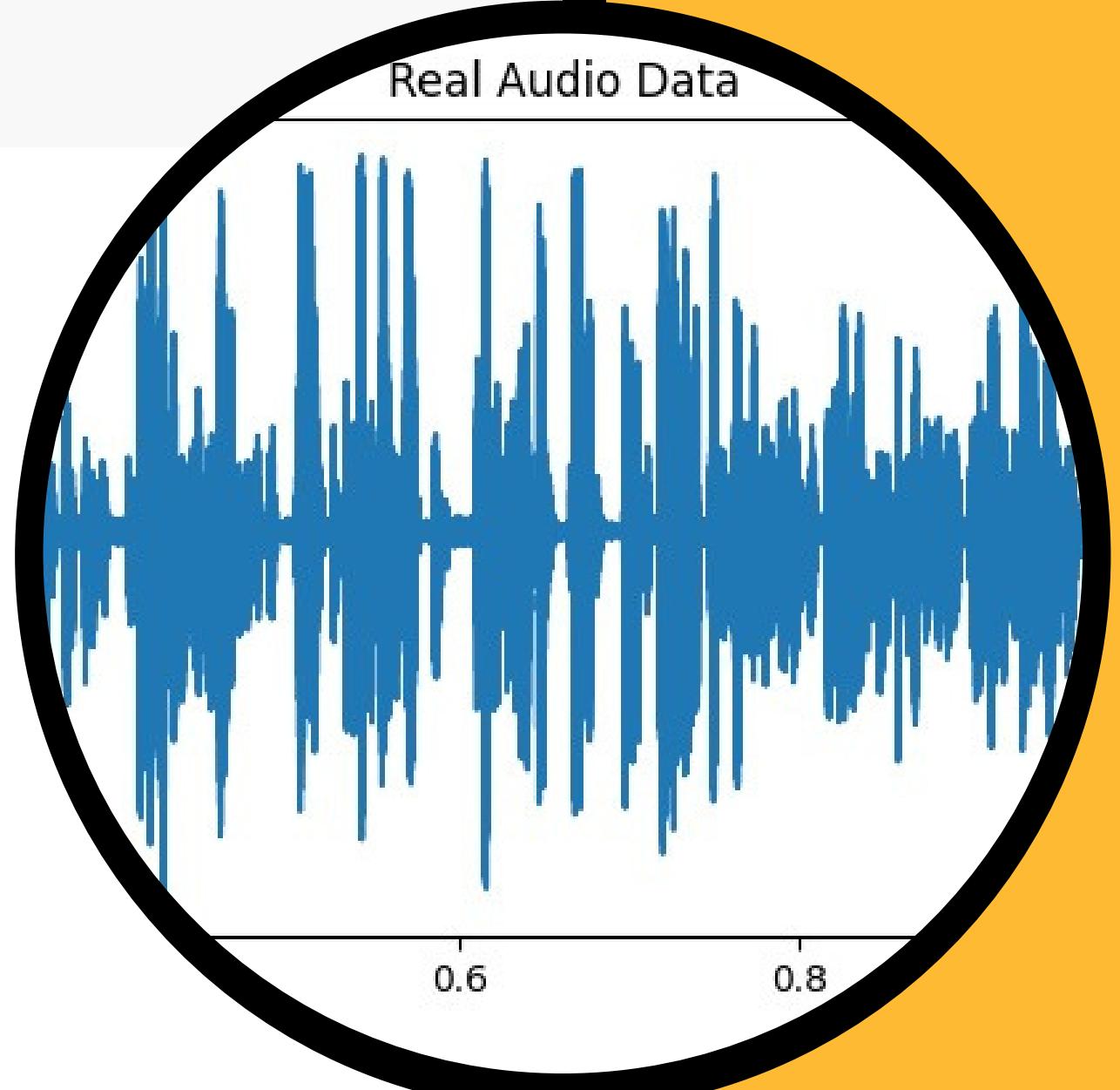
TEMPLATES

MODEL
LOADING

CONFIGURA
TION

AUDIO DEEPFAKE DETECTING MODEL

For audio analysis , we re using XGboost classifier to train and test the dataset. The model gives audio analysis as real or fake . We have extracted features from the audio such as chroma stf ,RMS,spectral bandwidth,spectral roll off , zerocrossing rate . The audio is divided in ultiple chunks and trained . Test accuracy is 0.91



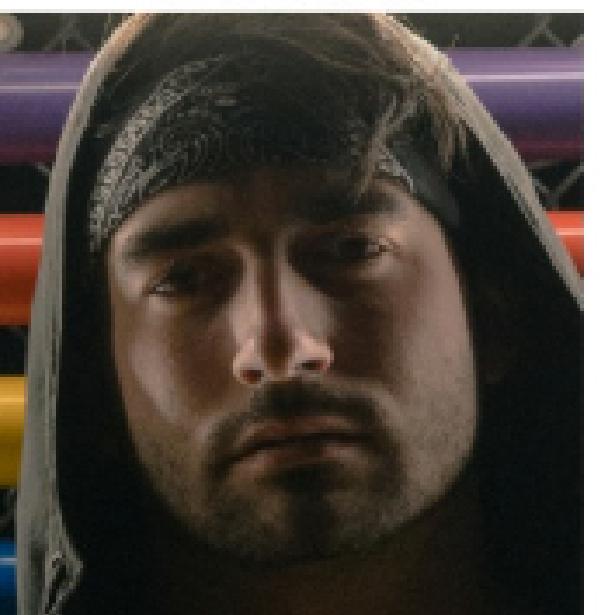
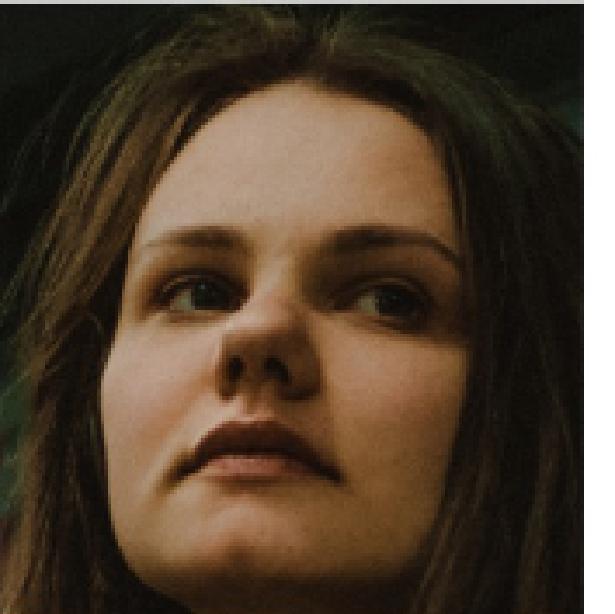
VIDEO DEEPCODE DETECTING MODEL

Video analysis uses CNN architecture by extracting frames from the video and uses open CV library to process and read the frames and then the frames are pre processed according to the models requirements , the model gives predictions based on if the video is real or fake. The model uses Adam optimizer and we get an accuracy of 87.74%

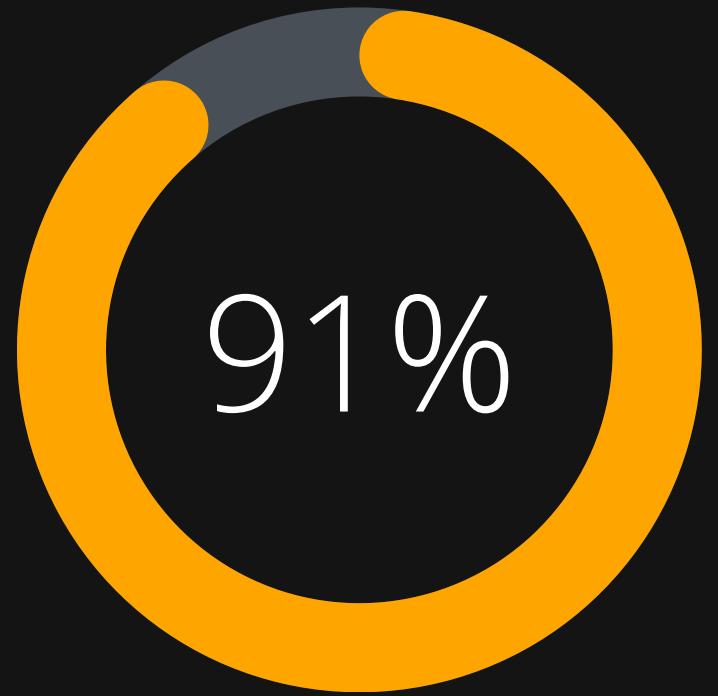


IMAGE DEEPCODE DETECTION MODEL

For Image analysis , the CNN architecture includes convolutional layers which are 5 , max pooling layers 5 , pre-processing layer 2 , 1 flantend layer and 1 dense layer ReLU activation function and softmax activation function , so the image are recieved and held with specified shape . The model accuracy is 77%

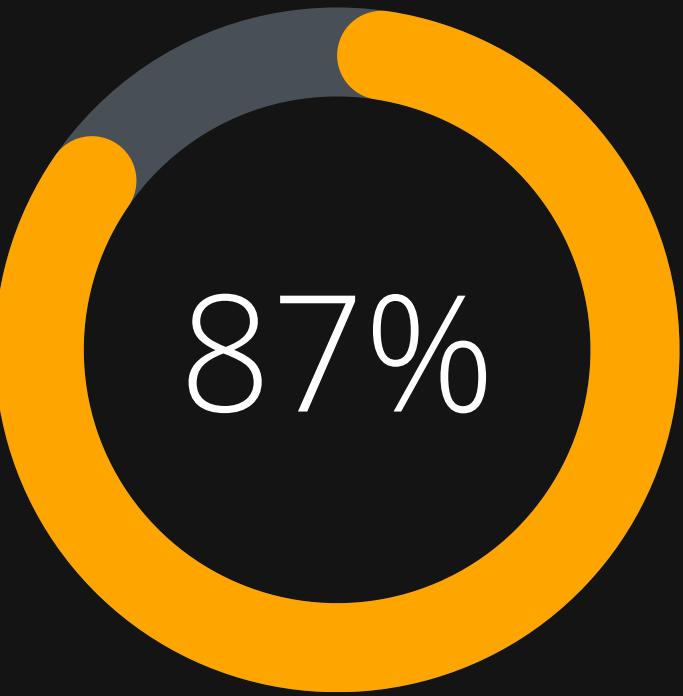


ACCURACY OF MODELS



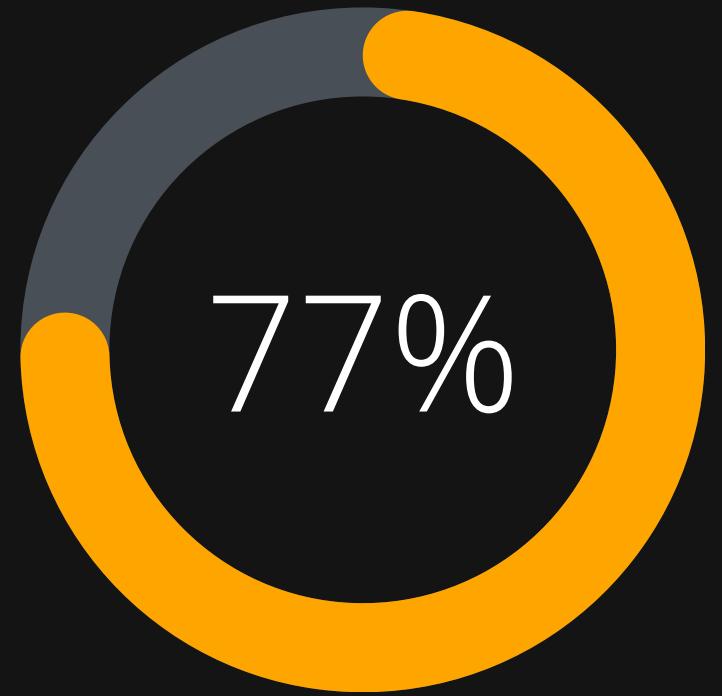
AUDIO

Audio result accuracy stands at 91%, with potential for further scaling to an impressive 98%



VIDEO

Video result accuracy stands at 87%, which could be way further improved by training it on more datasets



IMAGE

Image result accuracy stands at 77% which can also be scaled very much higher

FUTURE SCOPE

Increasing in interpretability



Stage 1

Model scaling



Stage 3

Chrome extension



Stage 5



Stage 2



Finding source of file



Watermark deepfake detection

Stage 4



Blockchain integration for better security of files

Stage 6

SCALABILITY



Cloud Integration and Scalability



Load Balancing

Implementing load balancing mechanisms to evenly distribute incoming requests across multiple servers.



Scalable Database Solutions

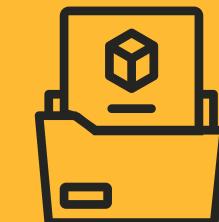
Choosing a scalable database solution, such as NoSQL databases or distributed database systems, to handle increasing amounts of data efficiently.

Implementing a cloud-based infrastructure to facilitate seamless scalability. Detection to dynamically scale resources based on demand, ensuring optimal performance during varying workloads



Distributed Computing Architecture

Designing a distributed computing architecture that enables the app to distribute processing tasks across multiple servers or nodes.



Containerization and Microservices

Adopting containerization technologies such as Docker and Kubernetes to encapsulate the app into modular, scalable units (microservices).

CONCLUSION

In conclusion, VeriFake stands at the forefront of deepfake detection, addressing ethical and legal challenges while navigating privacy concerns. Its commitment to responsible deployment and adherence to regulations underscores its pivotal role in safeguarding trust and authenticity in the digital landscape. As technology advances, VeriFake remains dedicated to staying ahead of emerging threats and contributing to a secure and trustworthy online environment.

