



True Vision

Ai-Powered Media Literacy Assistant



UNESCO Youth Hackathon 2025

True Vision

Your personal deepfake detector...

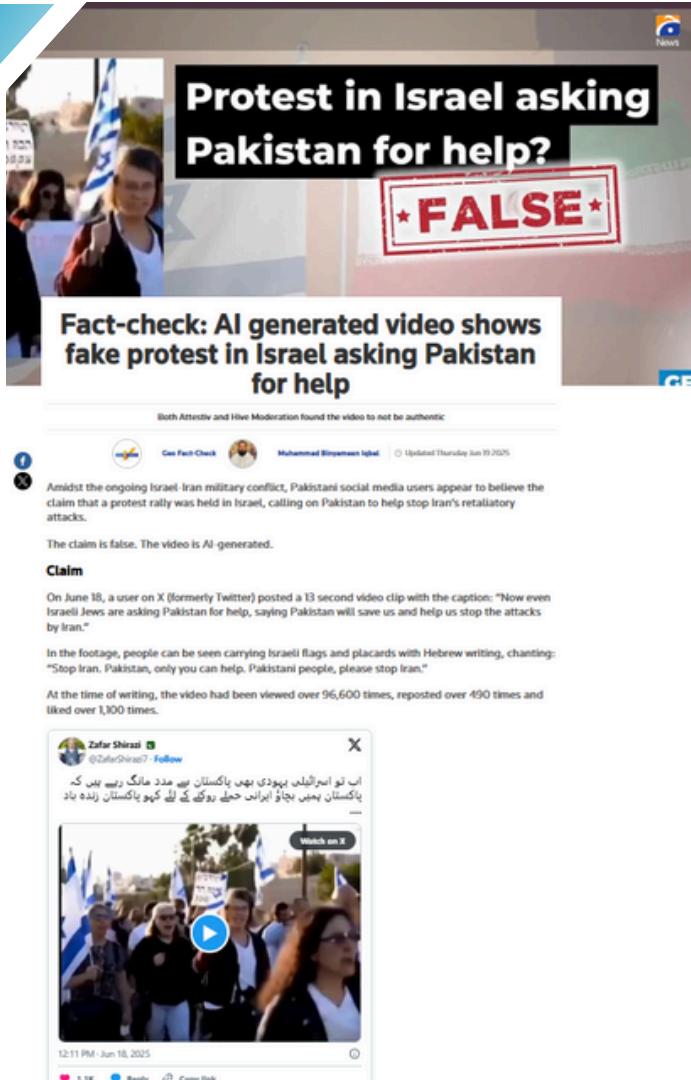
The image shows four smartphones arranged horizontally, each displaying a different screen of the True Vision app. The phones are set against a blue background with white circles.

- Phone 1 (Left):** Displays the home screen with the title "TRUE VISION" and a subtitle "Your personal DeepFake detector". It features a small illustration of a person looking at a smartphone. The text "Empowering Youth to Navigate Information Wisely" is at the bottom, followed by a "Get Started" button.
- Phone 2 (Second from Left):** Displays the "Welcome Onboard!" screen. It includes the text "Upload → Analyze → Learn" and three buttons: "Upload and Analyze", "Integrate with Apps", and "Explain and Educate". Below these buttons is an illustration of a person interacting with a large smartphone screen.
- Phone 3 (Third from Left):** Displays the "Learn About MIL" screen. It features a lightbulb icon and the text "Educate yourself on latest MIL trends across the world". It lists three categories: "MIL Certification", "What is Deep Fake", and "Latest MIL News". Each category has a small illustration and a brief description.
- Phone 4 (Right):** Displays a messaging interface titled "WhatsApp". It shows a search bar with "Ask Meta AI a question", a list of messages with "All" and "Unread" status, and a message from "Meta AI" with a green profile picture.

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Introduction



In an era where information travels faster than ever, misinformation spreads with equal velocity, creating confusion, distrust, and polarization in societies. Young people, as the most active users of Social Media, are especially vulnerable to false and misleading narratives.

4,000+

sexually explicit deepfake images and videos of children and youth

8 million+

publicly available deepfakes

96%

deepfake videos of non-consensual pornography out of a total of 8M+

\$12 billion+

deepfake scams globally



Problem Statement



BBC Register

AI puts real child sex victims at risk, experts say

18 June 2025

Lydia Dowling Ranera BBC News, Cambridgeshire and Helen Burchell BBC News, Cambridgeshire

Share  Save 



Deepfakes pose a significant challenge in South Asia. In countries such as India, Pakistan, Bangladesh, and Sri Lanka, where social media usage is at an all-time high, the dangers of misinformation and manipulated content are very real.

The rise of fake news, manipulated images, and deepfakes has made it increasingly difficult for individuals to distinguish between authentic and fabricated content. This digital pollution undermines democracy, fuels hate, and erodes trust in credible institutions.

Spotify's latest breakout band The Velvet Sundown appears to be AI-generated – and fans aren't happy

News By Graham Barlow last updated July 4, 2025

It's either AI or a very clever marketing campaign

 Comments (25)

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Traditional fact-checking is not enough to keep up with the scale and speed of misinformation. There is an urgent need for innovative solutions that combine cutting-edge technology with education to strengthen critical thinking and resilience among youth.

Project Overview

Mission and Vision

TrueVision is a real-time deepfake detection system designed to address the pressing issue of digital deception in South Asia. The platform uses AI algorithms to analyze and detect fake images, videos and audios across social media platforms like WhatsApp, Facebook, Instagram, Twitter, and YouTube. TrueVision will empower individuals, families, businesses, and governments to verify digital media, ensuring authenticity before trust is placed in the content.



Real vs Fake

Upload an image and the AI will tell you if it's Real or AI-generated.

Choose an image...

Drag and drop file here
Limit 200MB per file • JPG, JPEG, PNG, WEBP

Browse files

Hania-Aamir-Photo-1.jpg 83.9KB x

The `use_column_width` parameter has been deprecated and will be removed in a future release. Please utilize the `use_container_width` parameter instead.



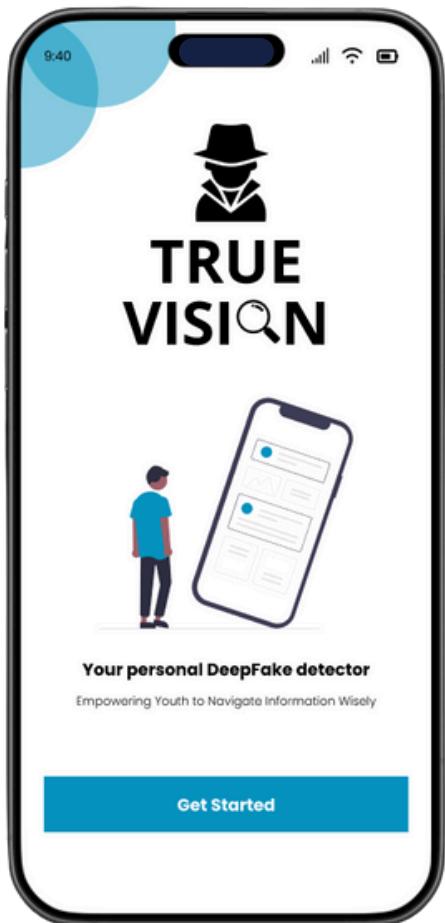
Uploaded Image

Technical Overview

Our solution uses deep learning architectures to detect misleading or fake media while providing users with easy-to-understand explanations. Built with a dynamic, interactive mobile and web application, the True Vision enables users to upload media, test authenticity, and receive instant feedback. Beyond detection, it integrates learning modules and interactive quizzes that foster media literacy, helping users develop the skills to question, analyze, and contextualize digital information.

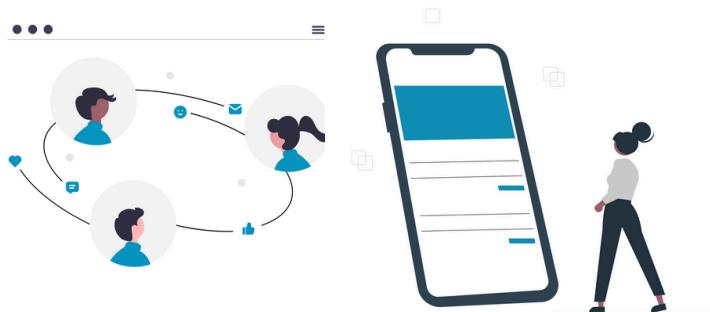


Objectives & Impact



Objectives

-  Detect fake and manipulated digital media using AI
-  Empower youth with Media and Information Literacy (MIL)
-  Promote critical thinking and digital resilience
-  Contribute to building a healthier, more trustworthy digital ecosystem



Impact & Target Audience

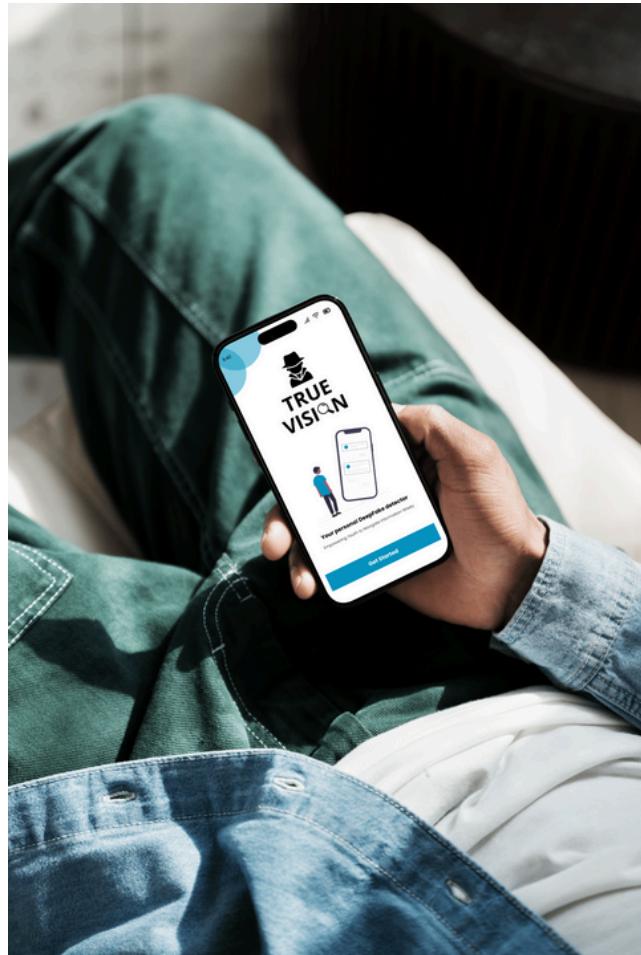
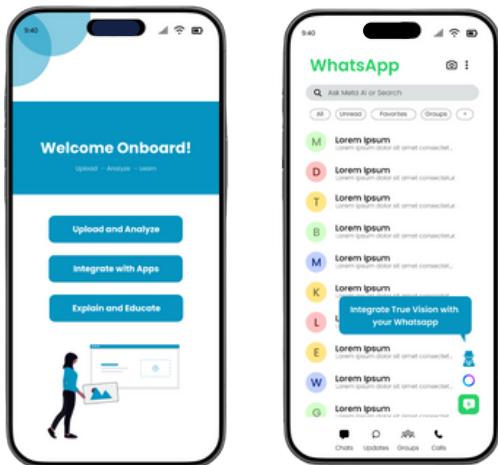
Using True Vision to detect fake and manipulated media will help reduce misinformation, while empowering youth with Media and Information Literacy (MIL) and building awareness and responsibility in how they consume and share content. By promoting critical thinking and digital resilience, individuals can better recognize truth, resist manipulation, and make informed choices. True Vision is a scalable solution, initially targeting individuals of all age groups, businesses, organizations and governments in South Asia, with the potential to expand and serve broader global populations in the future.



Prototype & Features

Prototype

The True Vision is a mobile app designed for South Asian users. We have successfully designed mobile app in figma, available for preview through the link: [TrueVision_Prototype](#)

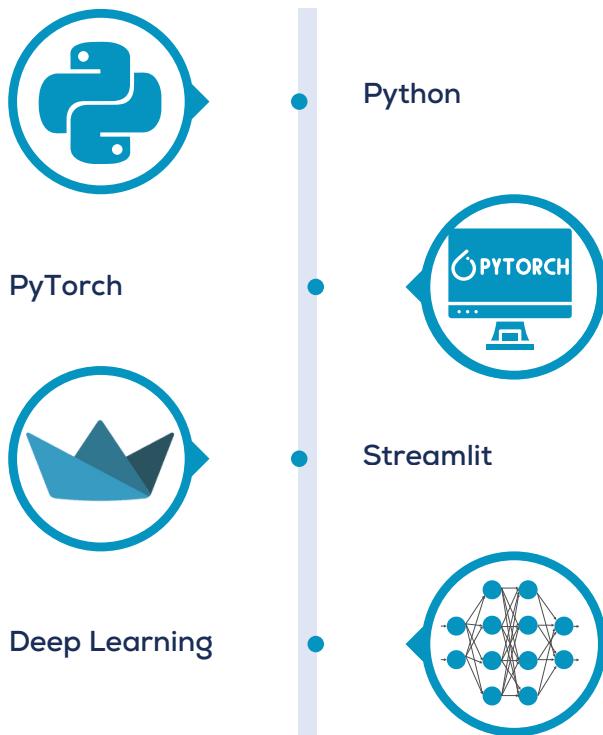


Features

-  Real-Time Detection
-  Multi-Language Support
-  Platform Integration
-  Educational Tools
-  Creative UI



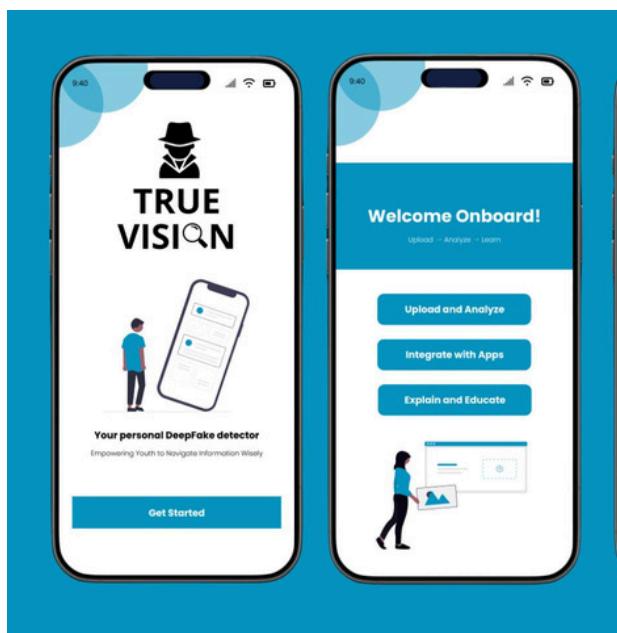
Technical Approach



TrueVision uses deep learning algorithms to analyze image, video and audio in real-time. The technology is based on CNNs (Convolutional Neural Networks) and Transformers, which process visual data and detect inconsistencies in facial features and movements. Additionally, voice pattern analysis ensures that audio content is checked for alterations. The system scans each frame of a video to detect subtle discrepancies such as unnatural blinking, lip-sync issues, or digitally altered backgrounds. TrueVision uses speech-to-text recognition to compare voice recordings to verified sources and identify if the voice has been synthetically altered.

Innovation & Creativity

True Vision stands out among all the existing deepfake solutions due to its light-weight architecture capable of handling multimodal inputs i.e. Image, Video and Audio. We envision the use of latest deep learning architectures which are more likely to give precise and accurate results upon real-world data. Moreover, True Vision is scalable which can be integrated directly to all the social media platforms with direct access to any deepfake content the user might be receiving through their accounts and profiles, ensuring a safer digital space for every individual out there.



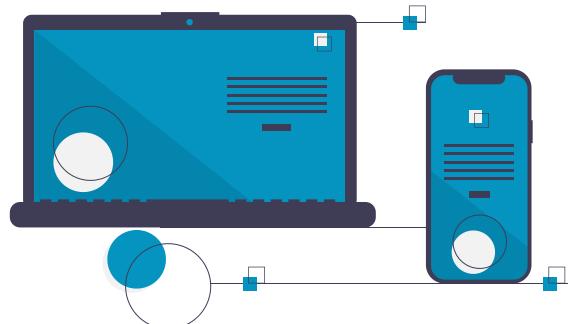
Deepfake Image Detector

We are delighted to announce that the Phase 1 of True Vision, the Deepfake Image Detector has already been developed and is live on Streamlit for Beta Testing (accessible through the link: [TrueVision ImageDetector](#))

Dataset Acquired

We used the [DeepGuardDB](#) dataset accessed through IEEE Dataport consisting of **13,000** images, divided into two separate folders: one containing **6,500** AI-generated (fake) images and the other containing **6,500** authentic (real) images. The ratio of Training data to Validation and Testing data was **70:30**. Preprocessing included operations of frame extraction, resizing, normalization, augmentation and label encoding.

Real vs Fake Image Detector



Model Architecture

A pre-trained ResNet-18 CNN architecture was used with additional Fully-connected, Dropout and Sigmoid layers. Adam optimizer, with binary cross entropy as the loss function and 32 as the batch size was used to train the model in 5 epochs. The architecture was specifically designed to be light-weight, efficient and yielding lesser computational costs.

Performance Measures

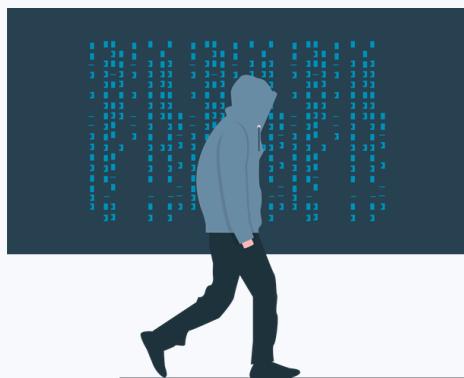
Accuracy was used as the main performance measure. We have achieved the highest Training Accuracy of up to **98.34%**, Validation Accuracy of **93.64%** and a Testing Accuracy of **93.90%** upon multiple experiments, which is up to the mark of SOTA models on the dataset.



Performance Metrics

Training Accuracy

- We have achieved a training accuracy of up to **98%** on our DeepFake Image Detector (Phase 1 of True Vision) and therefore, we expect to have up to **95%** training accuracy on the final version.

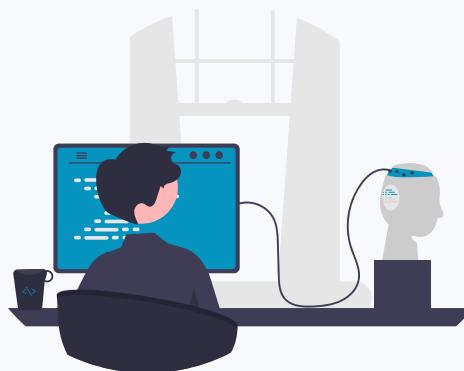


Testing Accuracy

- Based on our experimentations on the first phase of True Vision and an achieved testing and validation accuracy of up to **94%**, we can expect similar scores on our final versions too.

Real time Accuracy

- So far, we have achieved a real time accuracy of up to **90%** based on multiple experimentations from real time data and we hope to achieve even better performance from the final version.



Implementation Plan

Phase 1 (Week 1-3~already live)

- Image Dataset Gathering & Preprocessing
- Model Architecture & Training
- Testing & Implementation



DeepFake Image
Detector

Phase 2 (Week 4-7)

- Video Dataset Gathering & Preprocessing
- Model Architecture & Training
- Testing & Implementation



DeepFake Video
Detector

Phase 3 (Week 8-10)

- Audio Dataset Gathering & Preprocessing
- Model Architecture & Training
- Testing & Implementation



DeepFake Audio
Detector

Phase 4 (Week 11-14)

- Image, Video & Audio Integration & Debugging
- UI/UX Development
- Web & Mobile Application Development



Model
Integration &
UI
Development

Phase 5-6 (Week 15-17)

- Beta Testing and Revisions
- Deployment
- Maintenance



Beta Testing &
Deployment

Sustainability & Scope

1 Funding & Sponsorship

- [Ignite National Technology Fund](#)
- [Digital Rights Foundation](#)



2 Sustainability

According to our feasibility studies, the full development of True Vision will require a high-performance computing system equipped with a quality GPU and approximately 1 TB of memory resources. For deployment, the solution will necessitate engaging a few external services, all of which are both practical and readily implementable.

3 Future Scope

1 Educational Awareness

The True Vision serves as a learning resource to raise awareness among people of all age groups to understand AI misuse and media manipulation.

2 Adaptable Architecture

The modular design allows for easy integration of improved AI models in the future without rewriting the app.

3 Cross-Platform Usability

Lightweight front-end ensures accessibility across low-resource devices, enhancing inclusivity.

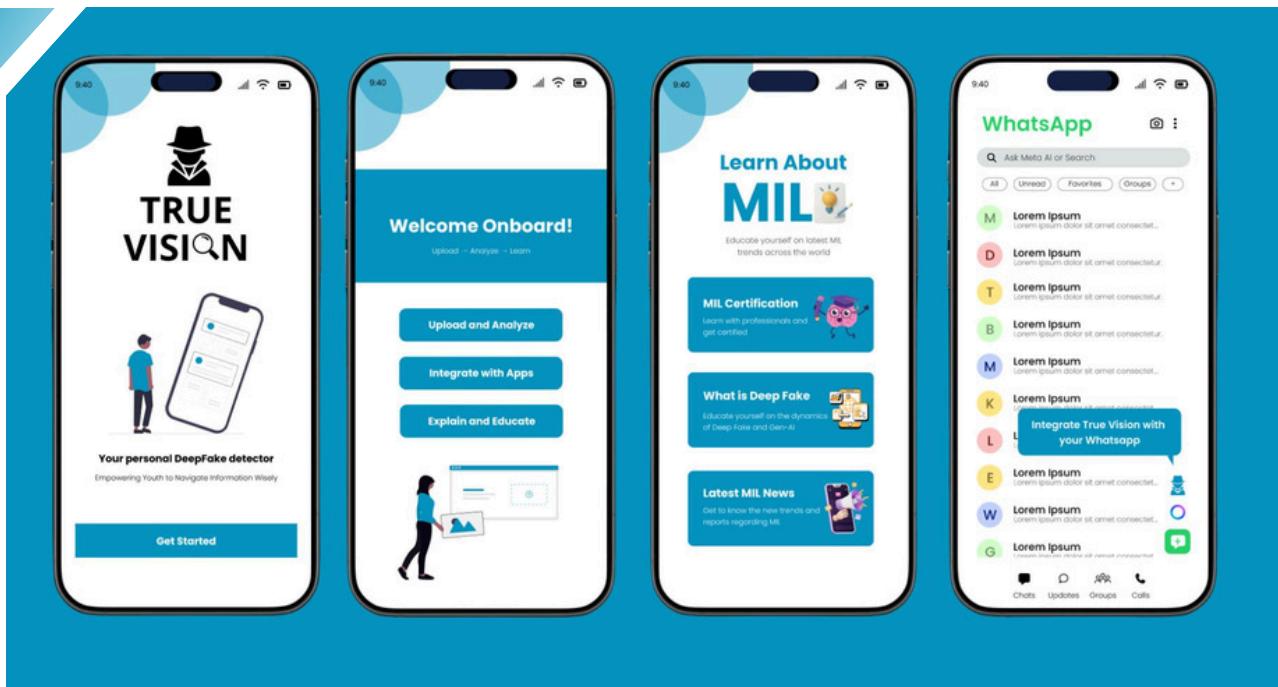
4 Ethical Alignment

True Vision promotes responsible AI grounded in ethical values of data privacy, user protection, and content integrity.

5 Community Engagement

True Vision can inspire youth-led initiatives in media literacy, fostering a sustainable cycle of education and awareness.

Conclusion



The True Vision demonstrates how youth-led innovation can address global challenges of misinformation and digital trust. While initially lightweight and educational, its sustainable design and broad scope make it a strong candidate for real-world deployment and future partnerships. By combining AI with social responsibility, the project not only protects individuals from manipulation but also empowers communities with knowledge – contributing to a safer, more truthful digital world.





Our Team



Mubashar Ul Islam



Programming & Documentation

With a background in English and a deep interest in space, literature, and philosophy, I bring a unique perspective to problem-solving. Currently sharpening my programming skills, I thrive on blending critical thinking with technology.



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Majid Hussain



Designing & Videography

A curious programmer and creative thinker, I blend technology with creativity to craft meaningful solutions. Driven, adaptive, and always learning, I thrive on turning challenges into opportunities.



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Programming & Prototyping

As a computer science student, AI engineer and a self-taught artist, I enjoy building intelligent systems while expressing ideas through art. I'm eager to turn challenges into opportunities for innovation.



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