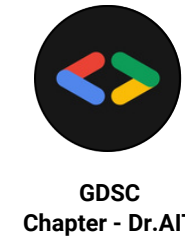




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Team Details

- Team Name - Snack Overflow
- Team Leader Name - Swapnil Rao
- Track - Software
- Title of the Project - guard.ai



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Brief About the Idea

- **Deepfake technology poses significant risks to media authenticity and personal security. The glorification of AI-generated fake content threatens:**
 1. **Media Integrity:** Misleading videos and audio can spread misinformation rapidly.
 2. **Personal Security:** Individuals can be targeted with malicious deepfake content.
 3. **Democratic Processes:** Potential manipulation of public opinion and election interference.
- **Our solution aims to provide robust detection and protection against deepfakes using:**
 1. **Advanced AI algorithms:** Grad-CAM, InceptionResNetV2, MTCNN
 2. **User-driven authentication and signature:** NFTs minted, MetaMask
 3. **Decentralized technologies:** Decentralized storage [IPFS], Pinata



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What problem your project aims to solve?

- 1.The need for reliable deepfake detection across multiple media types (images, audio, and video)
- 2.The lack of proactive protection against deepfake alterations for user-uploaded media.
- 3.The need for secure and distributed storage of media and verification data.



VIRAL-DONALD TRUMP DEEPPFAKE



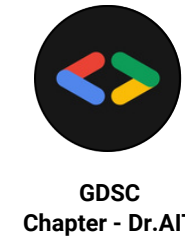
VIRAL-RONALDO DEEPPFAKE



LOOKS REAL, DOESN'T IT



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How different is it from any of the other existing ideas?

01 - PROACTIVE IMMUNIZATION

- Goes beyond detection to actively protect content
- Proprietary algorithms make protected media resistant to deepfake manipulation
- Enables instant verification of original, unaltered content

02 - DECENTRALIZED GOVERNANCE

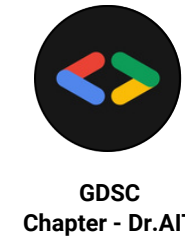
- Community-driven approach to content verification
- Utilizes blockchain for transparent, tamper-proof voting and reputation systems
- Reduces reliance on centralized authorities, enhancing trust and scalability

03 - CROSS-PLATFORM BROWSER EXTENSION

- Seamless integration with users' daily online activities
- Allows for real-time checking and protection of content before sharing
- First solution to offer "pre-upload" deepfake protection for social media



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UK ENERGY COMPANY VOICE SCAM

AI-generated audio mimicked a CEO's voice, leading an employee to transfer €220,000 to fraudsters in the UK—highlighting the serious financial risks posed by AI voice scams.



BARACK OBAMA

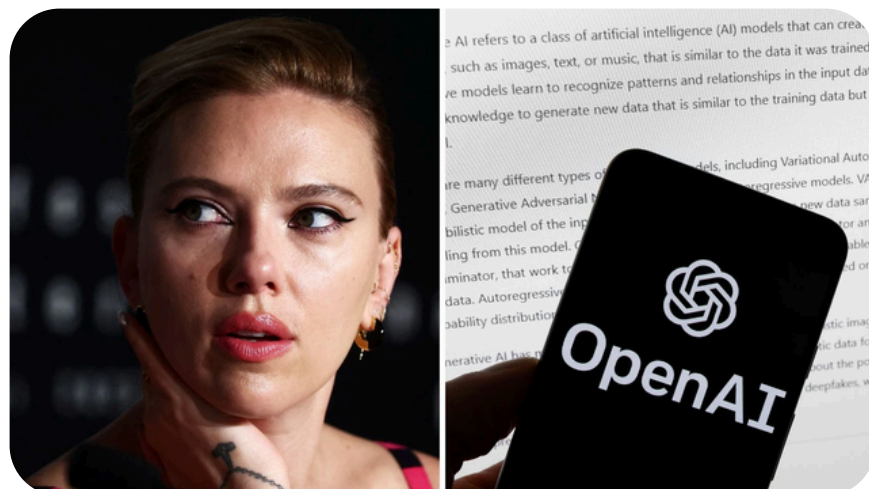
BuzzFeed and Jordan Peele created a deepfake PSA with Obama (voiced by Peele) calling Trump a "dipshit," warning about the dangers of deepfakes and online misinformation.



Case Studies

SCARLETT JOHANNSON VS OPEN AI

An AI demo imitated Scarlett Johansson's voice without consent, raising concerns about the misuse of AI in replicating celebrity identities for commercial purposes.



BORIS JOHNSON

Deepfake videos falsely showed Boris Johnson and Jeremy Corbyn endorsing each other's campaigns during the UK election, showcasing the potential for political misinformation.





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SMART CONTRACT INTEGRATION



- Automates and secures voting processes
- Manages user reputations and rewards
- Ensures transparent and tamper-proof operations

DECENTRALIZED STORAGE WITH IPFS

- Ensures data integrity and availability
- Resistant to censorship and single points of failure
- Efficient distribution of verification data



BROWSER EXTENSION

- Advanced ML models enable one-click deepfake checks.
- Pre-upload protection and integration with popular platforms.
- Confidence scores and highlights potential fakery.



Key Features

NON-FUNGIBLE TOKENS

- The file after protection is then minted as an NFT to assign a unique hash value to it using Blockchain, which then is stored in a decentralized IPFS storage platform/system.



AI-POWERED DEEPFAKE DETECTION



- Utilizes advanced machine learning models
- Analyzes images, audio, and video for signs of manipulation
- Provides confidence scores and highlighted areas of potential fakery

CONTENT "IMMUNIZATION"

- Proprietary algorithms protect media from future deepfake alterations.
- Generates a unique fingerprint for content.
- Allows instant verification of original media.

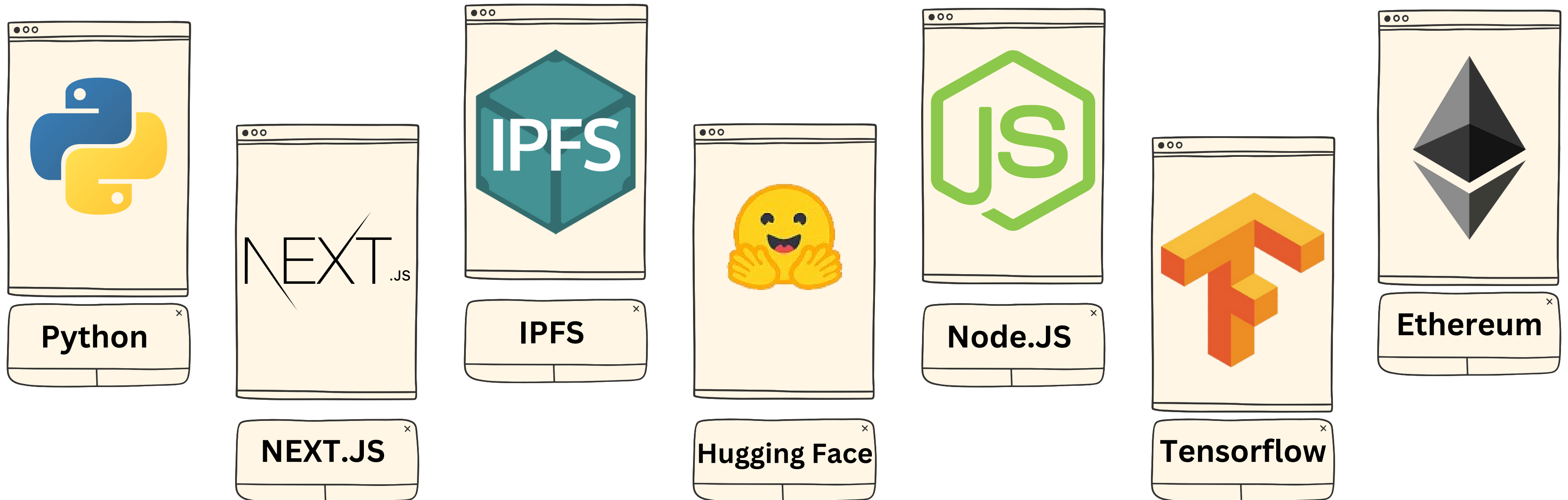




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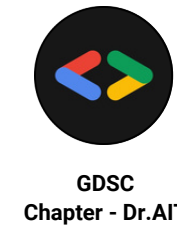
Technologies to be used in the solution



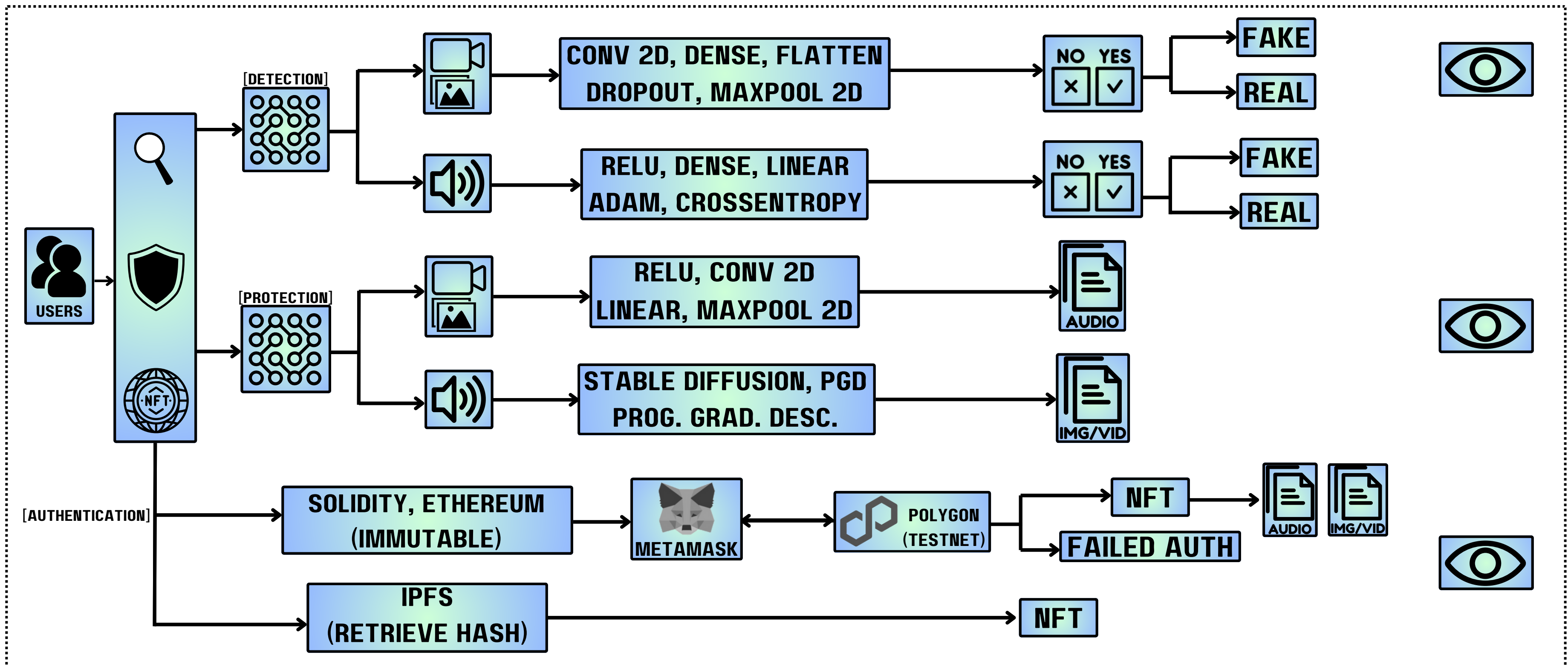


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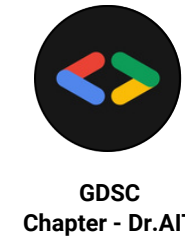


Architecture diagram of the proposed solution





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Thank You