

Video HR Interview Bot using Artificial Intelligence

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Abstract: *Due to the swift world of digital media today, recruitment processes are becoming increasingly done on the Internet; one needs efficient, scalable, and accessible solutions. The "Video HR Interview Bot" is AI-based; it revolutionizes this old-fashioned procedure of a human resource interview in the sense that it carries out real-time automated video interviews with candidates. Here, it uses NLP, computer vision, and machine learning algorithms to scan through the candidates-not only through their oral but also by non-verbal signs such as facial emotions, body language, and tone of voice. This bot conducts an HR interview in a structured format. It conducts a series of scripted questions based on the job description and requirements. Applicants communicate with the bot through video, where their responses are recorded and filtered for key competencies, communication skills, and cultural fit. The system provides real-time feedback and scores on various parameters so that the HR teams could focus on those candidates whose scores in the desired parameters are meeting the desired thresholds. Video HR Interview Bot streamlines the initial interview phase, thereby reducing time-to-hire, objectivity enhancement, and unconscious bias in candidate evaluation. Besides, it gives scalability, thus allowing the companies to handle bulk applications without compromising their standards. The system also provides a good data set for the HR practitioner to analyze, such as automated transcripts, sentiment analysis, and video insights, which all lead to a much more complete and well-informed decision-making process. In pursuing the core objectives of the project -that is, the efficiency and accessibility of recruitment while balancing fairness and quality in hiring-it must also help enhance the case of remote and high-volume recruitment.*

Keywords: HR automation, AI in recruitment, Candidate assessment, Computer vision, Non-verbal cues analysis, Bias reduction in hiring, remote hiring, Talent acquisition, interview practice.

I. INTRODUCTION

Preparing for all this to happen within today's academic context has become a vital part of the process toward professional achievement for a student [1]. For internships, graduate programs, and job placements, interviewing is a practice that very often doesn't quite get done properly [2]. Certainly, mock interviews with fellow students or even counselors can be helpful to this end, but they are hardly easy to come by, and it is not too practical to arrange [3]. We therefore propose developing an innovative chatbot that helps facilitate the interview practice of students using video conferencing [4].

This project is designed to create a smart chatbot based on artificial intelligence and natural language processing to be utilized in simulating real interview conditions. This chatbot will be accessible anytime by students to effectively, conveniently, and interactively facilitate practice in interviews [5]. Scientific developments in AI and ML have recently changed many areas of life, including human resources. The most apparent development is the one that involves new video HR interview bots which apply AI technology in optimizing the recruitment process [6]. Such kinds of bots comprise video analysis, NLP, and machine learning in developing an evaluation of the candidate's response [7].

In traditional recruitment methods, interviewing takes on multiple steps. Interviewing is very time-consuming and resource-oriented [8]. There would also be multiple scheduling conflicts, large applicant pools, and inconsistency in candidate evaluations with recruiters. In addition, the hiring process then unconsciously introduces human bias into the outcome, hence not optimal [9]. To ease the problems, Video HR Interview Bots offer the possibility of

making the interview more efficient as an automated process where there would be a streamlined evaluation process of the candidates and fewer chances of human bias [10].

The core functionality of Video HR Interview Bot is to evaluate candidates on the spot by video and audio analysis[11]. The bot conducts not only such interviews, which are held by raising questions according to one's predefined response, but also analyzes the verbal as well as non-verbal cues of candidates in their speech patterns, tone, facial expressions, and body language[12]. Such a multidimensional assessment offers the most comprehensive evaluation of a candidate's qualifications, soft skills, and his all-around fitness for a particular job role [13].

This research will aim at designing and evaluating a Video HR Interview Bot that not only can make a more efficient recruitment process but also unbiased and automatically cover candidate evaluations [14]. Such a tool may integrate advanced technologies, algorithms, and possibly play a significant role in altering some traditional interviewing practices, thereby making them better in terms of hiring decisions and eventually organizational performance [15].

Since organizations continue to transition towards more digital solutions in their operations, the Video HR Interview Bot also represents a milestone step forward in the modernization of talent acquisition strategies [16]. Through this paper, I will delve into the technological basis, design considerations, and the potential impact such systems might have in HR practice to thus demonstrate the capability of AI in revolutionizing the recruitment landscape.[17]

II. OBJECTIVE

This project's main Objective is to provide a realistic, AI-powered platform that gives students the chance to practice HR interviews in a virtual setting [18]. The method seeks to assist students in honing their interviewing abilities by mimicking typical interview circumstances [19]. This entails enhancing their responses to common HR inquiries in addition to concentrating on elements like presentation, confidence, and communication style [20]. The platform will offer a thorough interviewing experience that will help students get ready for the difficulties of interviews in the real world. Personalized feedback is one of the project's main objectives [21]. The system will produce comprehensive insights into the student's performance following each interview session, noting areas that require development and emphasizing strengths. Students will be able to obtain a comprehensive understanding of their interview readiness with this feedback, which will encompass both verbal responses and nonverbal behaviours [22]. The bot will assist students in honing vital nonverbal communication skills—which are frequently critical in an interview setting—by examining facial expressions, eye contact, and body language [23]. Furthermore, the project uses a big database to dynamically generate interview questions in order to provide students with a variety of interview experiences. Students will be able to train for a variety of circumstances as these questions are suited to different professional vocations and sectors [24]. By offering an engaging experience that resembles a real HR interview, the bot will communicate with students in real time, helping them to become more confident and less nervous during interviews [25]. The video HR interview bot will enable students to take charge of their job preparedness and enhance how they present themselves in in-person interviews by creating a culture of continuous development [26].

III. MOTIVATION

Interviews are intimidating, but proper preparation reduces these feelings by leaps and bounds [27]. With our video HR interview bot, you are provided with the best opportunity to hone your communication skills, practice the real-world questions, and feel more confident in your abilities [28]. Every session ensures learning, improvement, and taking another step closer to your ideal job. Every great achievement begins with preparation, so start now and make your aspirations a reality [29].

IV. LITERATURE SURVEY

Table I presents a summary of key papers relevant to chatbot: music recommendation system, including their methodologies and the author contributions. This literature survey showcases recent research in AI-powered Music

Recommendation System and related technologies. Smith [30] demonstrates the potential of AI in Music Recommendation System.

INTERVIEW PRACTICE – VOICE-BASED CHATBOT

(May 2022)

The main challenge of this paper is to develop a voice-based chatbot that can effectively simulate a human interviewer, accurately analyze interviewee responses, and generate reliable scores [31].

Based on the abstract, the paper likely explores the development and implementation of a voice-based chatbot for students to practice interviews online [32].

Interview Bot : Automating Recruitment Processing Natural Language Processing and Machine Learning (October2023)

The primary challenge of this paper is to develop a robust and effective interview bot that can accurately assess candidate responses, compare them to a diverse question bank, and generate reliable scores [33]. After extensive research and literature review and the work done by me for the improvement of the previous bot compare candidate to a question bank but we generate questions with the help of OpenAI [34].

Automated HR Interview System

(May 2021)

The primary challenge of this paper lies in developing a robust and accurate speech processing system that can effectively evaluate a candidate based on verbal cues [35]. While a text-based HR interview bot faces challenges in understanding and evaluating verbal cues, a video HR interview bot can offer several advantages to overcome these [36]

PROPOSED SYSTEM

This video-based HR interview practice system is proposed, which will help students prepare confidently for job interviews [37]. It uses AI to simulate realistic interview scenarios, where the users respond to personalized questions tailored to the chosen role or industry. The platform then analyzes speech, tone, body language, and content for detailed feedback on improvement in the development of the communication skills and infusion of confidence [38].

Students are able to keep track of their performance analytics, identify strengths and weaknesses, and have questions adjusted according to the user's skill level to continue growing [38]. It also provides mock interview simulations and an extensive resource hub for tips, strategies, and sample answers for common HR questions. The platform combines advanced AI technology with an intuitive interface that can best prepare students to succeed in real-world interviews and career growth [39].

BACKGROUND STUDY

The transition to professional life is one of the most critical and challenging phases faced by students [40]. The HR interview is considered one of the most important milestones in this journey and assesses the student's communication skills, confidence, problem-solving, and overall readiness for a professional environment [41]. However, many suffer from the lack of proper preparation, exposure, and structured guidance [42].

Challenges in Current Interview Preparation Methods:

Traditional methods of interview preparation, such as career counseling, workshops, and mock interviews, are often constrained by time, resources, and accessibility. Many students, particularly those in underprivileged or rural areas, lack access to experienced mentors or personalized guidance. Additionally, these methods are not scalable to meet the needs of a large number of students, leading to inconsistencies in their effectiveness [43].

Role of AI and ML in over-coming these challenges:

The recent advancements in Artificial Intelligence (AI) and Machine Learning (ML) have provided potential solutions to overcome such limitations in offering scalable, efficient, and personalized solutions. A video HR

interview bot enabled by this technology can help simulate real-life interview scenarios, where students can practice just like in a professional setting at their convenience[44].

Natural Language Processing (NLP):

NLP algorithms allow the bot to analyze student's verbal responses, assessing parameters such as clarity, tone, grammar, and content relevance [46].

The system can generate customized questions on the basis of a student's career aspirations, industry preferences, and past performance, thereby making an experience dynamic and personalized.

Feedback and Insights:

The system gives detailed feedback on student performance in terms of communication style and overall presentation. By monitoring performance metrics over time, students can know their strengths and weaknesses, thus allowing them to make targeted improvements.

Advantages of the System:

- **Accessibility:** Students from remote locations can access the platform, breaking geographical and financial barriers.
- **Personalization:** machine learning algorithms ensure that practice sessions are tailored to meet individual needs and progress.
- **Scalability:** the system can service thousands of students simultaneously, making it an efficient solution for large-scale deployment.
- **Real-Time Learning:** instant feedback allows a student to iteratively improve his skills through continuous practice.

SYSTEM ARTITECTURE

The video HR interview bot analyzes video and audio responses from students in real-time for simulated HR interviews, through the use of Natural Language Processing for content analysis, Computer Vision to analyze body language, and Speech Recognition to analyze clarity and confidence. Personalized feedback is provided to the student, showing improvement over time with the use of reinforcement learning to better tailor feedback to user interaction.

- **Data Preprocessing:** Input data is cleaned and prepared for further analysis.
- **Feature Extraction:** Audio and video features are extracted from the input data.
- **Model Development:** A machine learning model is developed using the extracted features.
- **Model Evaluation:** The model's performance is assessed through cross-validation.
- **Feedback Display:** The system provides feedback to users based on the evaluation results

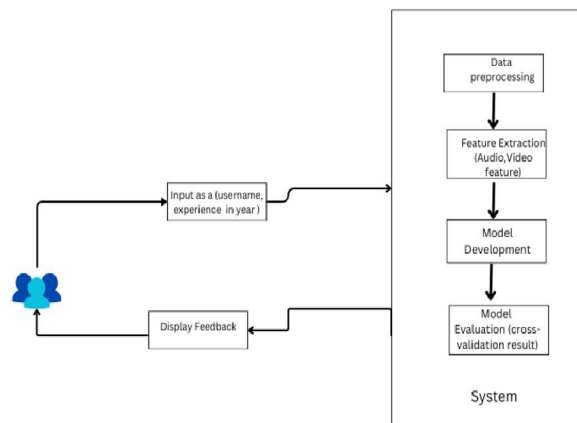


Fig. 1 System Architecture of Video Hr Interview Bot

Large Language Models (LLM)

Large Language Model is crucial for generating Question, Answering and human language in a way that is both meaningful and useful. The key LLP techniques applied in this paper include:

Question Generation:

LLMs such as GPT can generate varied and dynamic interview questions relevant to the industry or role which the student selects. This will ensure that the questions asked become varied, realistic, and challenging enough to help a student practice for various scenarios.

Contextual Answer Evaluation:

LLMs review the coherence and depth of the student's response by determining whether the answer is centered around the question, structured, and in sufficient detail. This can enable the bot to deliver more subtle feedback that will steer the student toward better answers.

Enhancing Dialogue Flow:

LLMs maintain the natural flow of the interview by generating follow-up questions based on whatever the student has said earlier. In this respect, it resembles a real interview and, therefore, comes off as more authentic for the student.

Adaptive Learning Feedback:

With the response history of the student, LLMs can offer differential feedback. If a student finds specific question types difficult-behavioral or technical, for example-the LLM can target its feedback at those issues and provide appropriate suggestions for improvement, which it will learn over time.

Sample Answer Generation:

The LLM will also provide sample answers to commonly asked HR questions as examples for students of how to structure their responses. This, therefore, guides students on the best way to present their experiences, especially those with the most significant strengths.

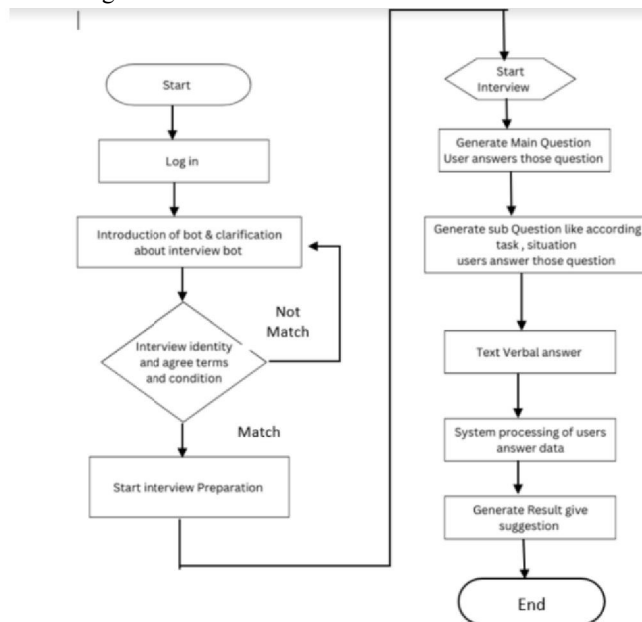


Fig. Flowchart for Video Hr Interview Bot

This is a detailed explanation of how it operates:

Start & Log In:

The process begins with the user initiating the system and logging in with their credentials. This ensures that only authorized users can access the interview bot. The system may also provide an interface to retrieve forgotten credentials or register new users. Once logged in, the user is directed to the next stage, where they interact with the bot. This step establishes a secure and personalized experience for each user.

Identity Verification:

The bot prompts the user to verify their identity and agree to the terms and conditions. This step is critical to confirm the authenticity of the participant and ensure legal compliance regarding data usage. If the identity does not match or the terms are not accepted, the user is redirected to review or clarify their input. If verified, the process proceeds to the preparation phase.

Interview Preparation:

Once verification is complete, the bot transitions to preparing the user for the interview. This may include explaining the format of the interview, the types of questions to expect, and tips for performing well. The preparation phase helps the user feel comfortable and confident before starting the actual interview.

Start Interview:

The bot starts a session that indicates the beginning of an interview. It gives a warm up message and then briefs the process. In this step, it marks the official entry into the assessment phase where the user starts answering the questions.

Main-Questions:

The bot creates follow-up or sub-questions dynamically based on the user's responses. The questions may be task-based scenarios, situational judgments, or behavioral aspects to check more profound insights into the user's capabilities. Adaptive questioning will help resemble the natural flow of an interview and challenge the user further.

Answer Processing

The system uses algorithms to assess the content, clarity, and tone of the user's answers. It takes into account many factors such as relevance, confidence, and language mastery. All of this provides a soundly objective assessment of the strengths and weaknesses of the user in communication and knowledge.

Results and Suggestions:

After processing, it generates a detailed result summary for the user. It indicates areas in which the user performed well and spots specific areas that need improvement. Personalized suggestions and strategies are given to enhance future performance. This ensures that the user receives actionable feedback through which he or she can refine interview skill

V. CASE STUDY

For instance, large companies such as McDonald's and I Food have used interview chatbots, which are AI-driven. McDonald's employed a bot called Olivia, through which it reduced interview scheduling time from 3 days to just 3 minutes, doubled the applications, and reduced hiring time by 60% in just one year. On its part, I Food employed an AI chatbot to recruit delivery

staff with an across-the-board 91% satisfaction rate and up to a 70% reduction in delivery costs.

These chatbots aid in making processes within HR more efficient; they automate tasks such as interview scheduling, onboarding, signing up for benefits, and performance management. In the case of ŠKODA AUTO company, they have reportedly used a chatbot in the process of onboarding to collect data, which they achieved a success rate of 95% in onboarding employees in this company.

Compared to implementation, HR chatbots save much time and costs. For example, these bots can perform routine tasks while allowing HR teams to engage in much more strategic functions Platforms for Building Interview Chatbots: There are many platforms, such as Chatfuel, Google Dialogflow, and Juji, for creating chatbots. One of the most interesting is probably Juji, since it allows even non-IT professionals to design their own chatbots accordingly and provide visualisations including pie charts on interviewee responses. It even allows building specific chatbots with customized interview questions and tracing user sentiment and patterns of responses²⁹. These examples tell how video HR interview bots can be beneficial for recruitment, onboarding, and efficiency in HR with saving time and resources. More detailed information about the sources can be found in.

Validation and Testing

1. Functional Testing

Purpose: This means that every feature of the bot will be confirmed to work as it is supposed to.

Key Tests:

- Test authenticate user and manage profile.
- Test dynamic interview questions generation.
- Test response recording and feedback generation.

Outcome: The bot functions well as it should and works error-free.

2. Accuracy and Feedback Testing

Purpose: The bot will ensure that the feedback it gives is accurate and actionable.

Key Tests:

- Compare the feedback from a bot with HR professionals on the same responses.
- Verify metrics like tone analysis, content assessment, and confidence scoring.
- Verify the clarity and usefulness of proposed improvement suggestions

Outcome: Verify that feedback will be within the appropriate scope as expected in HR interviews.

3. Usability Testing

Purpose: Verify how user-friendly the bot is, and what kind of user experience exists.

Key Tests:

- Verify that it's intuitive enough for students to follow through with the exercise.
- Verify the clarity of instructions on how the bot could be used and how the mock interview was conducted.
- Feedback from students to the overall experience.

Outcome: The output should be user-friendly to improve the involvement of students.

4. Audio/Video Processing Testing

Objective: Confirm the system's capability for multimedia inputs.

Key Tests:

- Verify audio-to-text transcription accuracy for variant accents and noise levels.
- Test video processing to identify facial expressions and body language.
- Playback and processing of recorded interviews should be smooth.

Outcome: Confirm reliable performance regarding audio/video input and analysis

REFERENCES

- [1]A. Chaudhari et al., "Cyber Security Challenges in Social Meta-verse and Mitigation Techniques," 2024 MIT Art, Design and Technology School of Computing International Conference (MITADTSoCiCon), Pune, India, 2024, pp. 1-7, doi: 10.1109/MITADTSoCiCon60330.2024.10575295.
- [2]Mali, Yael, and Nava Zisapel. "VEGF up-regulation by G93A superoxide dismutase and the role of malate-aspartate shuttle inhibition." *Neurobiology of Disease* 37.3 (2010): 673-681.

- [3]A. O. Vaidya, M. Dangore, V. K. Borate, N. Raut, Y. K. Mali and A. Chaudhari, "Deep Fake Detection for Preventing Audio and Video Frauds Using Advanced Deep Learning Techniques," 2024 IEEE Recent Advances in Intelligent Computational Systems (RAICS), Kothamangalam, Kerala, India, 2024, pp. 1-6, doi: 10.1109/RAICS61201.2024.10689785.
- [4]Modi, S., Mane, S., Mahadik, S., Kadam, R., Jambhale, R., Mahadik, S., & Mali, Y. (2024). Automated Attendance Monitoring System for Cattle through CCTV. REDVET-Revista electrónica de Veterinaria, 25(1), 2024.
- [5]Bhongade, A., Dargad, S., Dixit, A., Mali, Y.K., Kumari, B., Shende, A. (2024). Cyber Threats in Social Metaverse and Mitigation Techniques. In: Somani, A.K., Mundra, A., Gupta, R.K., Bhattacharya, S., Mazumdar, A.P. (eds) Smart Systems: Innovations in Computing. SSIC 2023. Smart Innovation, Systems and Technologies, vol 392. Springer, Singapore. https://doi.org/10.1007/978-981-97-3690-4_34.
- [6]S. P. Patil, S. Y. Zurange, A. A. Shinde, M. M. Jadhav, Y. K. Mali and V. Borate, "Upgrading Energy Productivity in Urban City Through Neural Support Vector Machine Learning for Smart Grids," 2024 15th International Conference on Computing Communication and Networking Technologies (ICCCNT), Kamand, India, 2024, pp. 1-5, doi: 10.1109/ICCCNT61001.2024.10724069.
- [7]S. Modi, M. Modi, V. Alone, A. Mohite, V. K. Borate and Y. K. Mali, "Smart shopping trolley Using Arduino UNO," 2024 15th International Conference on Computing Communication and Networking Technologies (ICCCNT), Kamand, India, 2024, pp. 1-6, doi: 10.1109/ICCCNT61001.2024.10725524.
- [8]U. Mehta, S. Chougule, R. Mulla, V. Alone, V. K. Borate and Y. K. Mali, "Instant Messenger Forensic System," 2024 15th International Conference on Computing Communication and Networking Technologies (ICCCNT), Kamand, India, 2024, pp. 1-6, doi: 10.1109/ICCCNT61001.2024.10724367.
- [9]V. Ingale, B. Wankar, K. Jadhav, T. Adedaja, V. K. Borate and Y. K. Mali, "Healthcare is being revolutionized by AI-powered solutions and technological integration for easily accessible and efficient medical care," 2024 15th International Conference on Computing Communication and Networking Technologies (ICCCNT), Kamand, India, 2024, pp. 1-6, doi: 10.1109/ICCCNT61001.2024.10725646.
- [10]S. Sonawane, U. Mulani, D. S. Gaikwad, A. Gaur, V. K. Borate and Y. K. Mali, "Blockchain and Web3.0 based NFT Marketplace," 2024 15th International Conference on Computing Communication and Networking Technologies (ICCCNT), Kamand, India, 2024, pp. 1-6, doi: 10.1109/ICCCNT61001.2024.10724420.
- [11]P. Mandale, S. Modi, M. M. Jadhav, S. S. Khawate, V. K. Borate and Y. K. Mali, "Investigation of Different Techniques on Digital Actual Frameworks Toward Distributed Denial of Services Attack," 2024 15th International Conference on Computing Communication and Networking Technologies (ICCCNT), Kamand, India, 2024, pp. 1-6, doi: 10.1109/ICCCNT61001.2024.10725776.
- [12]A. More, S. Khane, D. Jadhav, H. Sahoo and Y. K. Mali, "Auto-shield: Iot based OBD Application for Car Health Monitoring," 2024 15th International Conference on Computing Communication and Networking Technologies (ICCCNT), Kamand, India, 2024, pp. 1-10, doi: 10.1109/ICCCNT61001.2024.10726186.
- [13]U. H. Wanaskar, M. Dangore, D. Raut, R. Shirbhate, V. K. Borate and Y. K. Mali, "A Method for Re-identifying Subjects in Video Surveillance using Deep Neural Network Fusion," 2024 15th International Conference on Computing Communication and Networking Technologies (ICCCNT), Kamand, India, 2024, pp. 1-4, doi: 10.1109/ICCCNT61001.2024.10726255.
- [14]A. More, O. L. Ramishte, S. K. Shaikh, S. Shinde and Y. K. Mali, "Chain-Checkmate: Chess game using blockchain," 2024 15th International Conference on Computing Communication and Networking Technologies (ICCCNT), Kamand, India, 2024, pp. 1-7, doi: 10.1109/ICCCNT61001.2024.10725572.
- [15]J. D. Palkar, C. H. Jain, K. P. Kashinath, A. O. Vaidya, V. K. Borate and Y. K. Mali, "Machine Learning Approach for Human Brain Counselling," 2024 15th International Conference on Computing Communication and Networking Technologies (ICCCNT), Kamand, India, 2024, pp. 1-8, doi: 10.1109/ICCCNT61001.2024.10723852.
- [16]M. Dangore, S. Modi, S. Nalawade, U. Mehta, V. K. Borate and Y. K. Mali, "Revolutionizing Sport Education With AI," 2024 15th International Conference on Computing Communication and Networking Technologies (ICCCNT), Kamand, India, 2024, pp. 1-8, doi: 10.1109/ICCCNT61001.2024.10724009.

- [17]M. Dangore, D. Bhatnurkar, K. M. Bhale, H. M. Jadhav, V. K. Borate and Y. K. Mali, "Applying Random Forest for IoT Systems in Industrial Environments," 2024 15th International Conference on Computing Communication and Networking Technologies (ICCCNT), Kamand, India, 2024, pp. 1-7, doi: 10.1109/ICCCNT61001.2024.10725751.
- [18]A. More, S. R. Shinde, P. M. Patil, D. S. Kane, Y. K. Mali and V. K. Borate, "Advancements in Early Detection of Lung Cancer using YOLOv7," 2024 5th International Conference on Smart Electronics and Communication (ICOSEC), Trichy, India, 2024, pp. 1739-1746, doi: 10.1109/ICOSEC61587.2024.10722534.
- [19]Y. K. Mali, L. Sharma, K. Mahajan, F. Kazi, P. Kar and A. Bhogle, "Application of CNN Algorithm on X-Ray Images in COVID-19 Disease Prediction," 2023 IEEE International Carnahan Conference on Security Technology (ICCST), Pune, India, 2023, pp. 1-6, doi: 10.1109/ICCST59048.2023.10726852.
- [20]Y. Mali, M. E. Pawar, A. More, S. Shinde, V. Borate and R. Shirbhate, "Improved Pin Entry Method to Prevent Shoulder Surfing Attacks," 2023 14th International Conference on Computing Communication and Networking Technologies (ICCCNT), Delhi, India, 2023, pp. 1-6, doi: 10.1109/ICCCNT56998.2023.10306875
- [21]Y. K. Mali and A. Mohanpurkar, "Advanced pin entry method by resisting shoulder surfing attacks," 2015 International Conference on Information Processing (ICIP), Pune, India, 2015, pp. 37-42, doi: 10.1109/INFOP.2015.7489347.
- [22]Hrushikesh Kale, Kartik Aswar, Kisan Yadav, Dr. Yogesh Mali, "Attendance Marking using Face Detection", International Journal of Advanced Research in Science, Communication and Technology (IJAR SCT) Volume 4, Issue 3, October 2024, pp 417-424 DOI: 10.48175/IJAR SCT-19961.
- [23]Faizan Inamdar, Dev Ojha, Chaitanya Jakate, Dr. Yogesh Mali, "Job Title Predictor System", International Journal of Advanced Research in Science, Communication and Technology (IJAR SCT) Volume 4, Issue 3, October 2024, pp 457-463 DOI: 10.48175/IJAR SCT-19968.
- [24]Sawardekar, Sonali, Rahesha Mulla, Sonali Sonawane, Asharani Shinde, Vishal Borate, and Yogesh Kisan Mali. "Application of Modern Tools in Web 3.0." In Proceedings of Third International Conference on Computational Electronics for Wireless Communications: ICCWC 2023, Volume 2, p. 0. Springer Nature.
- [25]Yogesh Mali, Nilay Sawant, "Smart Helmet for Coal Mining", International Journal of Advanced Research in Science, Communication and Technology (IJAR SCT) Volume 3, Issue 1, February 2023, DOI: 10.48175/IJAR SCT-8064
- [26]Pranav Lonari, Sudarshan Jagdale, Shradha Khandre, Piyush Takale, Prof Yogesh Mali, "Crime Awareness and Registration System ", International Journal of Scientific Research in Computer Science, Engineering and Information Technology (IJSRCSEIT), ISSN : 2456-3307, Volume 8, Issue 3, pp.287-298, May-June-2021.
- [27]Jyoti Pathak, Neha Sakore, Rakesh Kapare , Amey Kulkarni, Prof. Yogesh Mali, "Mobile Rescue Robot", International Journal of Scientific Research in Computer Science, Engineering and Information Technology (IJSRCSEIT), ISSN : 2456-3307, Volume 4, Issue 8, pp.10-12, September-October-2019.
- [28]Devansh Dhote , Piyush Rai , Sunil Deshmukh, Adarsh Jaiswal, Prof. Yogesh Mali, "A Survey : Analysis and Estimation of Share Market Scenario ", International Journal of Scientific Research in Computer Science, Engineering and Information Technology (IJSRCSEIT), ISSN : 2456-3307, Volume 4, Issue 8, pp.77-80, September-October-2019.
- [29]Y. Mali and V Chapte, "Grid based authentication system", International Journal of Advance Research in Computer Science and Management Studies, vol. 2, no. 10, pp. 93-99, 2014.
- [30]Rajat Asreddy, Avinash Shingade, Niraj Vyavhare, Arjun Rokde, Yogesh Mali, "A Survey on Secured Data Transmission Using RSA Algorithm and Steganography", International Journal of Scientific Research in Computer Science, Engineering and Information Technology (IJSRCSEIT), ISSN : 2456-3307, Volume 4, Issue 8, pp.159-162, September-October-2019.
- [31]Shivani Chougule, Shubham Bhosale, Vrushali Borle, Vaishnavi Chaugule, Prof. Yogesh Mali, "Emotion Recognition Based Personal Entertainment Robot Using ML & IP", International Journal of Scientific Research in Science and Technology(IJSRST), Print ISSN : 2395-6011, Online ISSN : 2395-602X, Volume 5, Issue 8, pp.73-75, November-December-2020.
- [32]Amit Lokre, Sangram Thorat, Pranali Patil, Chetan Gadekar, Yogesh Mali, " Fake Image and Document Detection using Machine Learning", International Journal of Scientific Research in Science and Technology (IJSRST), Print ISSN : 2395-6011, Online ISSN : 2395-602X, Volume 5, Issue 8, pp.104-109, November-December-2020.

- [33]Ritesh Hajare, Rohit Hodage, Om Wangwad, Yogesh Mali, Faraz Bagwan, "Data Security in Cloud", International Journal of Scientific Research in Computer Science, Engineering and Information Technology (IJSRCSEIT), ISSN : 2456-3307, Volume 8, Issue 3, pp.240-245, May-June-2021
- [34]Yogesh Mali and Tejal Upadhyay, "Fraud Detection in Online Content Mining Relies on the Random Forest Algorithm", SWB, vol. 1, no. 3, pp. 13–20, Jul. 2023, doi: 10.61925/SWB.2023.1302.
- [35]V. K. Borate and S. Giri, "XML Duplicate Detection with Improved network pruning algorithm," 2015 International Conference on Pervasive Computing (ICPC), Pune, India, 2015, pp. 1-5, doi: 10.1109/PERVASIVE.2015.7087007.
- [36]Patil, Y., Paun, M., Paun, D., Singh, K., & Borate, V. K. (2020). Virtual painting with OpenCV using Python. International Journal of Scientific Research in Science and Technology, 5(8), 189-194.
- [37]Sawant, M. M., Nagargoje, Y., Bora, D., Shelke, S., & Borate, V. (2013). Keystroke Dynamics. International Journal of Advanced Research in Computer and Communication Engineering, 2(10), 4018-4020.
- [38]Gaikwad, Dnyanesh S., and Vishal Borate. "A Review Of Different Crop Health Monitoring And Disease Detection Techniques In Agriculture." IJRAR-International Journal of Research and Analytical Reviews (IJRAR) 10, no. 4 (2023): 114-117.
- [39]P. Shimpi, B. Balinge, T. Golait, S. Parthasarathi, C. J. Arunima and Y. Mali, "Job Crafter - The One-Stop Placement Portal," 2024 15th International Conference on Computing Communication and Networking Technologies (ICCCNT), Kamand, India, 2024, pp. 1-8, doi: 10.1109/ICCCNT61001.2024.10725010.
- [40]Yevlekar, Harshala R., Pratik B. Deore, Priyanka S. Patil, Rutuja R. Khandebharad, and Vishal Kisan Borate. "Smart and Integrated Crop Disease Identification System." (2019).
- [41]D. Sengupta, S. A. Nalawade, L. Sharma, M. S. J. Kakade, V. K. Borate and Y. K. Mali, "Enhancing File Security Using Hybrid Cryptography," 2024 15th International Conference on Computing Communication and Networking Technologies (ICCCNT), Kamand, India, 2024, pp. 1-8, doi: 10.1109/ICCCNT61001.2024.10724120sease Identification System." (2019).
- [42]V. Borate, Y. Mali, V. Suryawanshi, S. Singh, V. Dhoke and A. Kulkarni, "IoT Based Self Alert Generating Coal Miner Safety Helmets," 2023 International Conference on Computational Intelligence, Networks and Security (ICCINS), Mylavaram, India, 2023, pp. 01-04, doi: 10.1109/ICCINS58907.2023.10450044.
- [43]U. Mulani, V. Nandgaonkar, R. Mulla, S. Sonavane, V. K. Borate and Y. K. Mali, "Smart Contract System with Blockchain Capability for Improved Supply Chain Management Traceability and Transparency," 2024 15th International Conference on Computing Communication and Networking Technologies (ICCCNT), Kamand, India, 2024, pp. 1-7, doi: 10.1109/ICCCNT61001.2024.10723871.
- [44]Vishal Borate, Dr. Alpana Adsul, Palak Purohit, Rucha Sambare, Samiksha Yadav, Arya Zunjarrao, "A Role of Machine Learning Algorithms for Lung Disease Prediction and Analysis", International Journal of Advanced Research in Science, Communication and Technology (IJAR SCT) Volume 4, Issue 3, October 2024, pp 425-434 DOI: 10.48175/IJAR SCT-19962.
- [45]Vishal Borate, Dr. Alpana Adsul, Rohit Dhakane, Shahuraj Gawade, Shubhangi Ghodake, Pranit Jadhav, "A Comprehensive Review of Phishing Attack Detection Using Machine Learning Techniques", International Journal of Advanced Research in Science, Communication and Technology (IJAR SCT) Volume 4, Issue 3, October 2024, pp 435-441 DOI: 10.48175/IJAR SCT-19963.
- [46]Vishal Borate, Dr. Alpana Adsul, Aditya Gaikwad, Akash Mhetre, Siddhesh Dicholkar, "Analysis of Malware Detection Using Various Machine Learning Approach", International Journal of Advanced Research in Science, Communication and Technology (IJAR SCT) Volume 4, Issue 2, November 2024, pp 314-321 DOI: 10.48175/IJAR SCT-22159.