WWW.IJRPR.COM

International Journal of Research Publication and Reviews

Journal homepage: www.ijrpr.com ISSN 2582-7421

MOCK INTERVIEW EVALUATOR

Ms B.Jyothi[1], Palakolu Abhilash Reddy[2], Pittala Akhil Kumar[3] , Sripathi Dhanush Reddy[4]

[1]Assistant Professor Department of Datascience Anurag University, Hyderabad, bjyothids@anurag.edu.in
[2]Anurag University Hyderabad, 20eg110119@anurag.edu.in
[3]Anurag University Hyderabad, 20eg110121@anurag.edu.in
[4]Anurag University Hyderabad, 20eg110126@anurag.edu.in

ABSTRACT :

With the advent in technology, a lot of our common things have become smart. This has not only elevated the quality of our living standards but also increased our comfort and safety levels. Each and every field using this immense growth of technology for the betterment of their businesses, as this helps in cutting cost, time and manpower, providing the more accurate and precise results, within a blink of an eye. So, why not to use it in the most important aspect of a business? That is, practicing for Interview and recruitment process. Emotion is judged based on facial expression using deep learning CNN algorithm which will classify the emotion among the 7 categorical emotions. This system will help candidates to practice for mock interviews by facing mock interviews. It also provides feedback including facial preference, reaction time, speaking rate and volume to let users know their own performance within the mock interview. Hence this system will not only lower the stress and anxiety before an actual job interview but also improve the candidate's confidence.

Keywords—Face expression recognition, Convolution Neural Network, Interview, Recruitment process, AI.

Introduction :

Recently college graduates often have the chance to participate within the interview once they attempt to pursue further studies or find employment. So as to master all possible questions within the interview, the simplest way is to understand what sorts of questions could also be asked and practice responding to questions. Generally, college students rarely have the chance to practice interview during college. So as to extend opportunities for people to practice social

skills, like admission interview and employment interview, many scholars engaged within the design and development of social skill training systems Job interviews are employed by the potential future employer as a way to work out whether the interviewee is fitted to the company's needs. To form an assessment, interviewers heavily rely on social cues, i.e. actions, conscious or unconscious, of the interviewee that have a selected meaning during a social context, like employment interview. During this paper an approach is presented to employment interview simulation environment which uses a social virtual character as a recruiter and signal processing techniques to enable the virtual character to react and adapt to the user's behaviour and emotions. The aim of this simulation is to assist youngsters improve social skills which are pertinent to job interviews. The proposed system features a real- time social cue recognition system, a dialog/scenario manager, a behaviour manager. This system provides a way for admin to add question which helps the student to practice for technical rounds as well, The next section offers a quick review of the interdisciplinary literature. This system provides some feedbacks including facial preference, head nodding, reaction time, speaking rate and volume to let users know their own performance within the mock interview. The result of two or more interviews can be compared to track the progress of the candidates

Proposed Method :

The Real Time Mock Interview Using Deep Learning system revolutionizes interview preparation by offering an immersive experience for candidates . Candidates logs into the user- friendly web application, selects a job role, and engages in a mock interview. The system utilizes facial recognition, analyzing expressionsand reaction time, while speech-to-text

conversion evaluates verbal responses. After the interview, candiates receives detailed feedback, identifying areas for improvement such as maintaining eye contact or refining speech clarity.

A. Learning Integration:

Utilize deep learning models for facial recognition to analyze expressions, head movements, and reaction time during mock interviews. Implement speech-to-text conversion for assessing verbal responses, including grammar analysis and providing corrective suggestions.

B. User Interface Development:

Design an intuitive and interactive user interface for the web application, creating aseamless environment for users to engage in mock interviews.

C. Feedback Mechanism:

Develop a sophisticated feedback mechanism that provides detailed insights into facial preferences, reaction time, and speech clarity, enabling users to understandand improve their performance.

D. Data Handling and Storage:

Establish a robust database management system to securely store user data, interview records, and other relevant information, ensuring the reliability and privacy of the system.

E. Web Application Deployment:

Deploy the web application on servers, potentially utilizing cloud hosting for accessibility. Ensure the platform is user- friendly and compatible across devices.

Implementation :

For creating an Interview experience we rely on a Django framework which helps in establishing a real-time experience in which candidates can practice for technical interviews by attempting quiz like modules which were created in Teacher login.

Login

First teacher or placement co- ordinator needs to login with admin credentials then they receive an OTPfor authentication

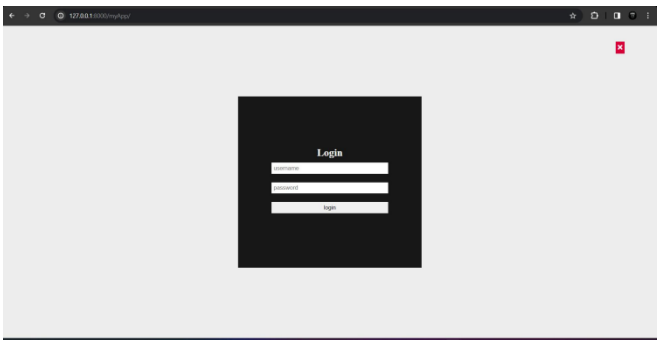

Fig 1. Login page

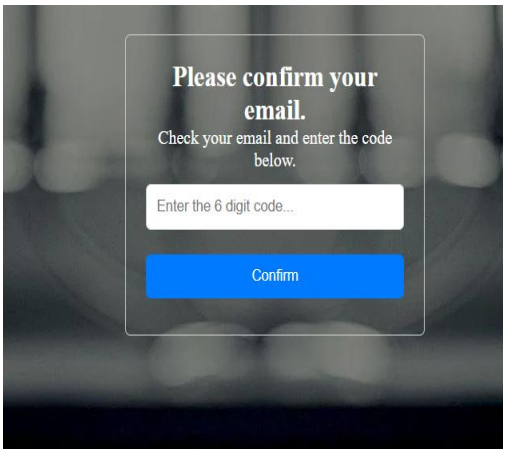

Fig 2. OTP Authentication

Adding modules

After login in teacher login page user has access to view or add modules. By adding they can create new company-specific quizzes by adding questions and in view page they can view all previously added quizzes and their results

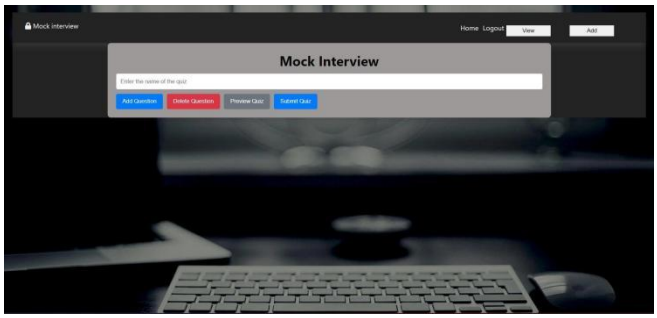

Fig 3. Add page

Student Sign-up

When a candidate wants to practice for his company placement he needs to sign up by giving his details then he can find the uploaded modules and practice.

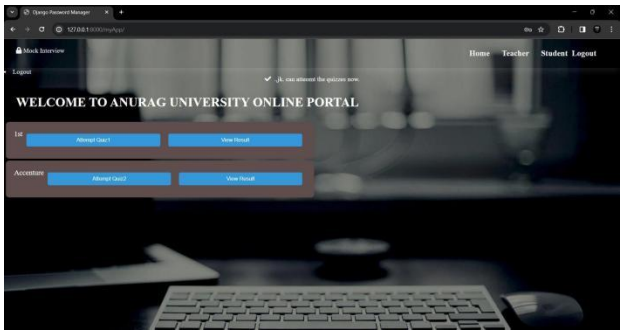

Fig 5. Student Home page

Attempting :

When the user is giving the interview with the help of the webcam user's facial expression will be analyzed. When the user chooses to start interview the OpenCV runs in the background and starts to record the video of the interview. This facial expression will be analysed based on the dataset imported in the system and this data will be stored in the database. This proposed system will help users who are nervous or anxious while giving the interviews. The interviewers keep keen attention on the expressions of the candidates they are interviewing because many candidates are rejected because they are not confident while giving the interviews. Therefore, facial expression analysis is required or essential so that the interviewee can improve his performance in front of the panel interviewing the user by taking mock interviews which will help the interviewee while giving actual company recruitment interviews.

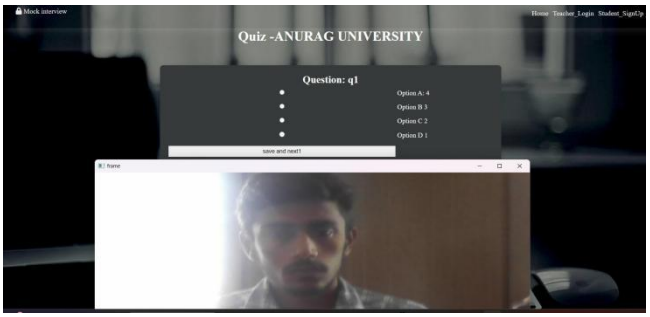

Fig 6. While attending Interview

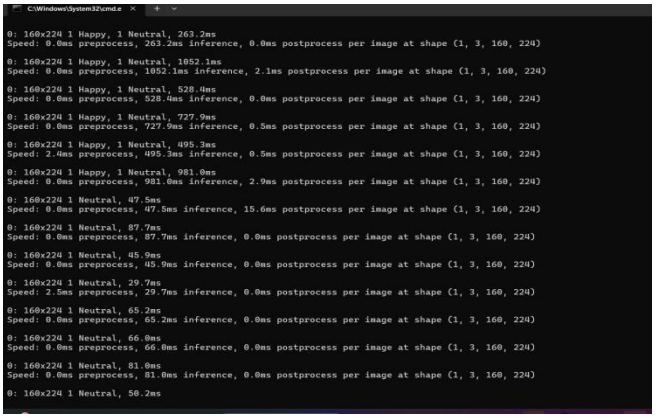

Fig 7. Continuous monitoring of expression

Feedback*:*

After user completes the interviews based on performance and progress result will be displayed. This result will help user to improve on the factors in which the result is bad. Result will be displayed in tabular format. User's facial expression analysis will be displayed in the result. Both factors will be considered and result will be displayed. The result of two or more interviews can be compared to track the progress of the candidates.

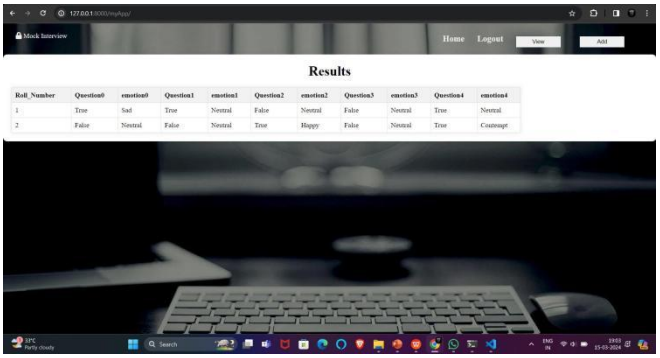

Fig 8. Feedback

APPLICATIONS:

In today's scenario, getting placed in a company has become very difficult and the candidate doesn't want to commit any mistake and lose his opportunity. Hence this system provides a way of practicing for his placement by helping candidates to prepare for both technical rounds as well as interview rounds.

1. **Interview Preparation Platform**: The primary application is to provide a platform for individuals to practice and prepare for job interviews, especially inscenarios where virtual interviews arebecoming more common.
2. **Training and Development**: Companies could use this system as part of their training and development programs to help employees improve their interview skills, communication abilities, and emotional intelligence.
3. **EducationSector**: Educational institutions can integrate this system into their career counseling services to help students prepare for college admissions interviews or job placement interviews.
4. **Recruitment and Hiring**: Employers can utilize the system to assess potential candidates' interview skills and emotional intelligence during the hiring process,especially for remote positions where initial interviews may be conducted online.
5. **Research and Development**: Researchers in the fields of human-computer interaction, artificial intelligence, and psychology can use the system to studyhuman behavior, emotional responses, andthe effectiveness of virtual training environments.
6. **Skill Assessment**: Beyond interviews, the system could be adapted to assess and train other interpersonal skills such as public speaking, negotiation, and conflict resolution.
7. **Personal Development**: Individuals who want to improve their communication skills or emotional intelligence for personal growth and development coulduse the system as a self-improvement tool

Overall, this mock interview evaluator works as a perfect tool for students who are willing to get placed in their dream companies. After the pandemic also 82% of the companies are preferring online platforms for hiring. Whereas, students are not familiar with those platforms and may face anxiety this system helps them to practice and to perform self evaluation.

CONCLUSION :

In this paper, we presented an approach that enhances a virtual agent by the ability to interpret and respond to social cues of users participating in a simulatedjob interview. In order to achieve seamless credible interaction, oursystem automatically recognizes the user's social cues in real time. Based on these, the system reacts and adapts to the user's behaviour. Furthermore, theinteraction with the system and user can be recorded and presented to the user to enhance the learning effect, for example,by identifying emotions in the simulatedinterview.

By integrating seamlessly into existing educational and corporate environments, the system can play a pivotal role in shaping the future of interview training and skill development. Furthermore, its adaptability allows for continuous refinement and customization to meet the specific needs of users across different industries and sectors.

Overall, the Real-Time Mock Interview Using Deep Learning system represents a powerful tool for empowering individuals to excel in interview situations, navigate career opportunities more effectively, and ultimately achieve their professional goals. Through ongoing research, innovation, and collaboration, the system has the potential to make a significant impact onthe way people prepare for and engagein interviews in the digital age.

Acknowledgment:

We extend our sincere gratitude to all those who contributed to the development and implemention of Mock interview evaluator . We would like to express our appreciation to Ms B. Jyothi, Assistant Professor at the Department of Data Science, for her valuable guidance and support throughout the project. We also acknowledge the efforts of our team members S.Dhanush Reddy, P. Akhil kumar and Abhilash Reddy for their dedication and hardwork in bringing this project to fruition. Additionally, we would like to thank the faculty and participated in testing and refining the application. Finally, we are grateful for the support and resources provided by Anurag University, which made this project possible.

REFERENCES :

1. Yi-Chi Chou, Felicia R. Wongso, Chun-Yen Chao and Han-Yen Yu, "An AI Mock-interview Platform for Interview Performance Analysis",10th International Conference on Informationand Education Technology, 2022.
2. Dulmini Yashodha Dissanayake , Venuri Amalya , Raveen Dissanayaka3, Lahiru Lakshan, Pradeepa Samarasinghe, Madhuka Nadeeshani , Prasad Samarasinghe , "AI-based Behavioural Analyser for Interviews/Viva" ,IEEE 16th International Conference on Industrial and Information Systems (ICIIS),2021.
3. Vikash Salvi, Adnan Vasanwalla, Niriksha Aute and Abhijit Joshi,"VirtualSimulation of Technical Interviews",IEEE 2017.
4. Y. C. Chou and H. Y. Yu, "Based on the application of AI technology in resume analysis and job recommendation",IEEE International Conference on Computational Electromagnetics (ICCEM), pp. 291-296,2020.
5. Aditi S. More, Samiksha S.Mobarkar, Siddhita S. Salunkhe, Reshma R. Chaudhari ,"SMARTINTERVIEW USING AI",

TECHNICAL REACHERORGANIZATION OF INDIA, 2022.

6. Danai Styliani Moschona,"An Affective Service based on Multi-Modal Emo□on Recognition, using EEG enabled Emotion Tracking and Speech Emotion Recognition", IEEE 2022.
7. Luis Felipe ParraGallegoa, Juan Rafael Orozco-Arroyave, "Classificationof emotions and evaluation of customer satisfaction from speech in real-worldacoustic environments", ELSEVIER2022 .
8. Xinpei Jin1,2, Yulong Bian*1,2, Wenxiu Geng1,2, Yeqing Chen1,2, Ke Chu1,2, Hao Hu1,2, Juan Liu1,2, Yuliang Shi1,3, and Chenglei YangXinpei Jin, Yulong Bian, Wenxiu Geng, Yeqing Chen, Ke Chu, Hao Hu,
9. Juan Liu, Yuliang Shi, and Chenglei Yang, "Developing an Agent-based Virtual Interview Training System for College Students with High Shyness Leve", IEEE 2022 .
10. Zelin Chen, Guoxin Qiu, Xiangyu Li, Caixia Li, Kexin Yang, Zhuanggui Chen, Leyan Gao, Shuo Lu, "Exploring the relationship between children's facial emotion processing characteristics and speech communication ability using deep learning on eye tracking and speech performance measures", IEEE 2022.
11. Qian Wang, Mou Wang, Yan Yang ,Xiaolei Zhang, "Multi- modal emotion recognition using EEG and speech signals", ELSEVIER 2022.
12. Ftoon Abu Shaqra, Rehab Duwairi, Mahmoud Al-Ayyoub, "Recognizing Emotion from Speech Based on Age and Gender Using Hierarchical Models",The10th International Conference onAmbient Systems, Networks andTechnologies (ANT), ELSEVIER, 2019.
13. Denae Ford, Titus Barik, Leslie Rand-Pickett, Chris Parnin,"The Tech-Talk Balance: What Technical Interviewers Expect from Technical Candidates",IEEE 2017.
14. Dongdong Li, Jinlin Liu, Zhuo Yang, Linyu Sun, Zhe Wang," Speech emotion recognition using recurrent neural networks with directional self- attention", IEEE 2021.
15. Julie E. Sharp, "Work in Progress: Using Mock Telephone Interviews with Alumni to Teach Job Search Communication", IEEE 2022.