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MINIPROJECT REPORT ON

INTERVIEW SIMULATOR WITH ARTIFICIAL INTELLIGENCE

Submitted under the Project based Learning for the Subject

Simulation and Modelling...

(ELECTRONICS AND TELECOMMUNICARION ENGINEERING)

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Abstract

The obstacles that today's students confront during interviews include introversion, insecurity, and a lack of social or technical abilities. When trying to increase interview performance, training becomes strongly advised. In the project under consideration, a new approach to interview preparation is proposed in an application. Our programme develops an interactive method of assisting software engineers in their interview preparation by integrating the benefits of numerous technologies, such as Artificial intelligence and chatbots. contributing to the user receiving correct feedback.

Relevance

According to popular belief, the success of a job interview is determined by three factors: technical expertise (sometimes known as "hard skills"), personality traits and qualities (also known as "soft skills") manipulation of impressions and "skills." The latter term refers to a person's ability to present themselves in a desired manner through appearance, demeanour, or behaviour . Different techniques can be used to train the soft and hard talents, ensuring an improvement in self-confidence and job interview performance.

Preface

This project is built on a chatbot and artificial intelligence. The candidate is given predetermined questions, and his performance is evaluated in accordance with his responses. You ought to be a competent coder. You should ideally have some prior Python programming knowledge since the exercises are in Python. However, proficient programmers who are not familiar with Python may typically still finish the exercises. Variables, linear equations, function graphs, histograms, and statistical means must all be concepts you are familiar with.

literature survey

The interview simulator was developed using a Design Science methodology with the main objective of assisting inexperienced requirements engineers. The outcomes have been encouraging: The interview simulator can interpret questions that are asked in a vacuum and retrieve relevant data about RE concepts including tasks, goals, users, advantages, stakeholders, constraints, and integration. The simulator also summarises the dialogue, responds to meta-questions, and provides context-specific answers to inquiries. Additionally, the simulator's responses are haphazard, ambiguous, and incomplete.

Mock interviews are being used more frequently in fields relating to medicine. They serve as accurate simulations of actual interviews and are used for training, skill verification, and feedback. As one instance, consider the good outcomes of a mock interview session for student pharmacists. Participants reported feeling more confident and praising the questions asked during the fake interview. Motivational training is yet another method utilised to instruct professionals from a variety of professions, including those in healthcare. Interviewing, which aims to boost motivation, confidence, and interest .

An developing technology called virtual reality (VR) is able to create incredibly lifelike environments and accurately recreate real-life experiences. Virtual reality can be used to construct training systems with many benefits, including excellent accessibility, flexibility, continuous feedback, and fast feedback [12] [13]. People with mental disorders are increasingly using these programmes to prepare for interviews. Gamification approaches are incorporated into a number of these VR systems' methods, including role-playing, task completion, and performance-based scoring.

Iulia Stanica
Maria-Iuliana Dascalu
Constanta Nicoleta Bodea
Alin Dragos Bogdan Moldoveanu
2018 Zooming Innovation in Consumer Technologies Conference (ZINC)
Year: 2018 | Conference Paper | Publisher: IEEE

Proposed work

1. Chatbot-based Interview Simulator: A Feasible Approach to Train Novice Requirements Engineers

   (Muhammad Laiq , Oscar Dieste , 2020 10th International Workshop on Requirements Engineering Education and Training (REET))
   Year: 2020 | Conference Paper | Publisher: IEEE

2. VR Job Interview Simulator Where Virtual Reality Meets Artificial Intelligence For Education

   (Iulia Stanica , Maria-Iuliana Dascalu , Constanta Nicoleta Bodea , Alin Dragos Bogdan Moldoveanu
   2018 Zooming Innovation in Consumer Technologies Conference (ZINC))
   Year: 2018 | Conference Paper | Publisher: IEEE
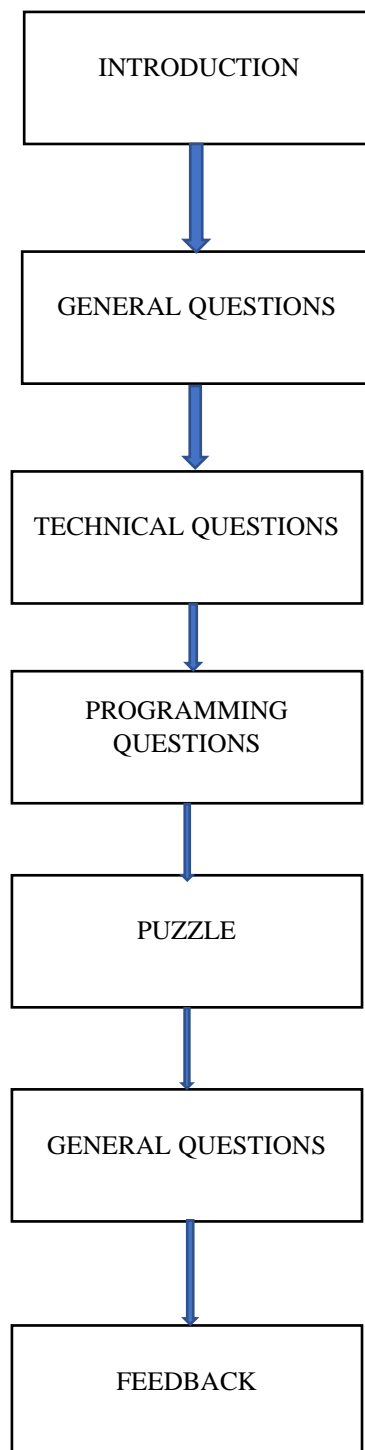
Problem Statement

Interview Simulator with artificial intelligence

Nowadays, coming to an interview presents a number of difficulties for candidates, including introversion, insecurity, and a lack of social or technical abilities. Training is now strongly advised. There are no instruments accessible for training or practise. Consequently, we are developing this interview simulator that uses artificial intelligence.

Objectives

1. Create an AI-based interview simulator to aid in the development of interview skills in students.
2. Give students a genuine virtual experience.
3. Get students ready for interviews

Flow chart

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┌─────────────────────────┐
│      INTRODUCTION       │
└─────────────────────────┘
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             ▼
┌─────────────────────────┐
│    GENERAL QUESTIONS    │
└─────────────────────────┘
             │
             ▼
┌─────────────────────────┐
│   TECHNICAL QUESTIONS   │
└─────────────────────────┘
             │
             ▼
┌─────────────────────────┐
│      PROGRAMMING        │
│       QUESTIONS         │
└─────────────────────────┘
             │
             ▼
┌─────────────────────────┐
│         PUZZLE          │
└─────────────────────────┘
             │
             ▼
┌─────────────────────────┐
│    GENERAL QUESTIONS    │
└─────────────────────────┘
             │
             ▼
┌─────────────────────────┐
│        FEEDBACK         │
└─────────────────────────┘
```

Procedure

1. In Microsoft vs code open python file.
2. Insatll packages pyttsx3, speachrecognization,pyaudio.
3. Get the program.
4. launch the application and adhere to the guidelines

Result

Program run as excepted.

Conclusion And Future Research

The interview simulator was developed utilising a Python methodology with the main objective of assisting new requirements students. Emerging technologies like virtual reality and chatbots are cutting-edge tools for training in many different fields. There are reportedly 21 million professional software developers worldwide, and more and more young people are becoming interested in this industry . However, during interviews, they must overcome numerous difficulties, and training is the greatest approach to be more prepared for them

The future research will focus on applying the interview simulator to different problem domains by utilizing the modular structure of the knowledge base. In addition to different domains, more work will be done to make an interview simulator to act like a real assistant.

REFERENCES

1. S. Yang and C. Evans, "Opportunities and challenges in using ai chatbots in higher education," in Proceedings of the 2019 3rd International Conference on Education and E-Learning, 2019, pp. 79–83.
2. R. M. Aysina et al, "Using a Computer Simulation to Improve Psychological Readiness for Job Interviewing in Unemployed Individuals of Pre-Retirement Age." Ed. Vlad Glăveanu and Andrew Allen. Europe's Journal of Psychology 13.2, pp. 251–268, 2017.

Useful links-

1. https://en.wikipedia.org/wiki/Artificial_intelligence
2. https://www.careeronestop.org/JobSearch/Interview/common-interview-questions.aspx

source code –

https://drive.google.com/file/d/19yOBhb2EysE3ov90OlL13Ne9BHTswbb-/view?usp=drivesdk