


```
AI_Dr: Does the patient have the following symptoms: coal_or_tea_colored_urine?  
no  
AI_Dr: Does the patient have the following symptoms: foamy_urine?  
yes  
AI_Dr: Does the patient have the following symptoms: swelling_in_hands?  
yes  
AI_Dr: Does the patient have the following symptoms: creatinine_in_blood?  
yes  
AI_Dr: Does the patient have the following symptoms: blood_in_urine?  
yes  
AI_Dr: I think you are suffering from : lupus_nephritis  
true
```

Figure 17: Diagnosis: lupus nephritis

```
AI_Dr: Does the patient have the following symptoms: coal_or_tea_colored_urine?  
no  
AI_Dr: Does the patient have the following symptoms: foamy_urine?  
no  
AI_Dr: Does the patient have the following symptoms: severe_pain_in_the_side_and_back?  
yes  
AI_Dr: Does the patient have the following symptoms: pain_in_lower_abdomen_and_groin?  
yes  
AI_Dr: Does the patient have the following symptoms: pink_red_or_brown_urine?  
yes  
AI_Dr: Does the patient have the following symptoms: cloudy_or_folu_smelling_urine?  
yes  
AI_Dr: Does the patient have the following symptoms: nausea_and_vomiting?  
yes  
AI_Dr: I think you are suffering from : kidney_stones  
true
```

Figure 18: Diagnosis: kidney stone

4. Here some other result for different disease of Brain Disease:

```
AI_Dr: Does the patient have the following symptoms: speak_incomplete_sentence?  
no  
AI_Dr: Does the patient have the following symptoms: memory_loss?  
yes  
AI_Dr: Does the patient have the following symptoms: misplace_items?  
yes  
AI_Dr: Does the patient have the following symptoms: hard_to_make_decision?  
yes  
AI_Dr: I think you are suffering from : alzheimer_disease  
true
```

Figure 19: Diagnosis: alzheimer

```
AI_Dr: Does the patient have the following symptoms: memory_loss?  
no  
AI_Dr: Does the patient have the following symptoms: twitching_of_muscles?  
no  
AI_Dr: Does the patient have the following symptoms: headache?  
yes  
AI_Dr: Does the patient have the following symptoms: difficulty_in_balance?  
yes  
AI_Dr: Does the patient have the following symptoms: seizure?  
yes  
AI_Dr: Does the patient have the following symptoms: loss_in_sensation_in_limbs?  
yes  
AI_Dr: I think you are suffering from : brain_tumour  
true
```

Figure 20: Diagnosis: brain tumor

```
do.  
AI_Dr: Does the patient have the following symptoms: speak_incomplete_sentence?  
yes  
AI_Dr: Does the patient have the following symptoms: loss_of_word?  
yes  
AI_Dr: Does the patient have the following symptoms: cannot_read_or_write_sentence?  
yes  
AI_Dr: I think you are suffering from : aphasia  
true
```

Figure 21: Diagnosis: aphasia

```
AI_Dr: Does the patient have the following symptoms: memory_loss?  
no  
AI_Dr: Does the patient have the following symptoms: twitching_of_muscles?  
yes  
AI_Dr: Does the patient have the following symptoms: fatigue_and_weakness?  
yes  
AI_Dr: Does the patient have the following symptoms: drooping_things?  
yes  
AI_Dr: Does the patient have the following symptoms: shortness_breath?  
yes  
AI_Dr: I think you are suffering from : ais_and_neuromuscular_disease  
true
```

Figure 22: Diagnosis: ais and neuromuscular

AI_Dr: Does the patient have the following symptoms: headache?
no

AI_Dr: Does the patient have the following symptoms: poor_balance?
no

AI_Dr: Does the patient have the following symptoms: shaking_hands?
yes

AI_Dr: Does the patient have the following symptoms: weakness?
yes

AI_Dr: Does the patient have the following symptoms: difficulty_in_controlling_bladder?
yes

AI_Dr: I think you are suffering from : cerebral_palsy
true

Figure 23: Diagnosis: cerebral palsy

AI_Dr: Does the patient have the following symptoms: memory_loss?
no

AI_Dr: Does the patient have the following symptoms: twitching_of_muscles?
no

AI_Dr: Does the patient have the following symptoms: headache?
no

AI_Dr: Does the patient have the following symptoms: poor_balance?
yes

AI_Dr: Does the patient have the following symptoms: difficulty_swallowing?
yes

AI_Dr: I think you are suffering from : ataxia
true

Figure 24: Diagnosis: ataxia

5 Here some other result for different disease of Skin Disease:

AI_Dr: Does the patient have the following symptoms: whiteheads?
no

AI_Dr: Does the patient have the following symptoms: thinning_of_hair?
yes

AI_Dr: Does the patient have the following symptoms: patchy_bald_spots?
yes

AI_Dr: Does the patient have the following symptoms: brittle_nails?
yes

AI_Dr: I think you are suffering from : alopecia_areata
true

Figure 25: Diagnosis: alopecia areata

AI_Dr: Does the patient have the following symptoms: thinning_of_hair?
no

AI_Dr: Does the patient have the following symptoms: dry_skin?
no

AI_Dr: Does the patient have the following symptoms: patchy_rash?
yes

AI_Dr: Does the patient have the following symptoms: scaling_spots?
yes

AI_Dr: Does the patient have the following symptoms: cracked_skin?
yes

AI_Dr: I think you are suffering from : psoriasis
true

Figure 26: Diagnosis: psoriasis

AI_Dr: Does the patient have the following symptoms: whiteheads?
yes

AI_Dr: Does the patient have the following symptoms: blackheads?
yes

AI_Dr: Does the patient have the following symptoms: red_bumps?
yes

AI_Dr: I think you are suffering from : acne
true

Figure 27: Diagnosis: acne

AI_Dr: Does the patient have the following symptoms: whiteheads?
no

AI_Dr: Does the patient have the following symptoms: thinning_of_hair?
no

AI_Dr: Does the patient have the following symptoms: dry_skin?
yes

AI_Dr: Does the patient have the following symptoms: Itchiness?
yes

AI_Dr: Does the patient have the following symptoms: oozing_and_thrusting?
yes

AI_Dr: I think you are suffering from : eczema
true

Figure 28: Diagnosis: eczema

AI_Dr: Does the patient have the following symptoms: dry_skin?
no

AI_Dr: Does the patient have the following symptoms: patchy_rash?
no

AI_Dr: Does the patient have the following symptoms: cold_fingers_and_toes?
yes

AI_Dr: Does the patient have the following symptoms: skin_turn_blue?
yes

AI_Dr: Does the patient have the following symptoms: stinging_pain?
yes

AI_Dr: I think you are suffering from : raynauds_phenomenon
true

Figure 29: Diagnosis: raynaud's phenomenon

AI_Dr: Does the patient have the following symptoms: patchy_rash?
no

AI_Dr: Does the patient have the following symptoms: cold_fingers_and_toes?
no

AI_Dr: Does the patient have the following symptoms: flushing?
yes

AI_Dr: Does the patient have the following symptoms: swollen_bumps?
yes

AI_Dr: Does the patient have the following symptoms: visible_veins?
yes

AI_Dr: I think you are suffering from : rosacea
true

Figure 30: Diagnosis: rosacea

In summary, Prolog hypothesis rules function similarly to recipes in that they instruct a computer program on how to make predictions or recommendations based on input data. The rules use conditions to determine whether certain things are true or false and then use that information to generate new hypotheses or predictions. The finding of the study is that a Medical Expert System using Artificial Intelligence(AI)(Bokolo, 2021; Das et al., 2015; Das & Sanyal, 2019) is being playing a momentous responsibility in healthcare disease analysis and medical diagnosis(Das et al., 2018a; Das, Sanyal & Datta, 2020a, 2020b; Das et al., 2018b; Das & Sanyal, 2020) to assist the doctor as well as nurses as an AI crisis manager.

Conclusion

In conclusion, using expert systems to identify diseases has proven to be a successful and efficient method of assisting patients and medical professionals in identifying and treating illnesses. Expert systems can evaluate enormous volumes of data, offer recommendations that are fast and accurate, and serve as a decision-support tool. By enabling early diagnosis, lowering diagnostic mistakes, improving treatment outcomes, and raising patient happiness, this technology has the potential to change the healthcare sector. The development of more advanced expert systems can be very useful to detect diseases with better accuracy and effectiveness, ultimately helping with the early detection of diseases and minimizing their impact.

Acknowledgement

The authors acknowledge the diverse R&D resources provided by Management, JIS College of Engineering, and JIS GROUP.

Conflict of Interest:

Author Dr. Sumit Das, Monali Sanyal, Rghab Rano and Rik Choudhury declare that they have no conflict of interest. This article does not contain any studies with human participants or animals performed by any of the authors. Informed consent was obtained from all individual participants included in the study.

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