



المؤتمر الصحي الدولي الرابع لزيارة الأربعين

The 4<sup>th</sup> International Congress on Health in Arbaeen

چهارمین کنگره بین المللی سلامت در اربعین

مادیتک انامیرینیر  
انامیرینیر

**Title:**

## Artificial Intelligence-based Medical Source Placement and Pilgrims' Recommender System in Mass Gathering Medicine for Arbaeen Health

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زیارت اربعین، مقدمه ظهور



# المؤتمر الصحي الدولي الرابع لزيارة الأربعين

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مركز تخصصي في طب الامراض المعدية

## Introduction

- **The Arbaeen Pilgrimage is the greatest gathering toward Imam Hossain (AS) who resisted to injustice and tried to highlight human rights for a better life.**





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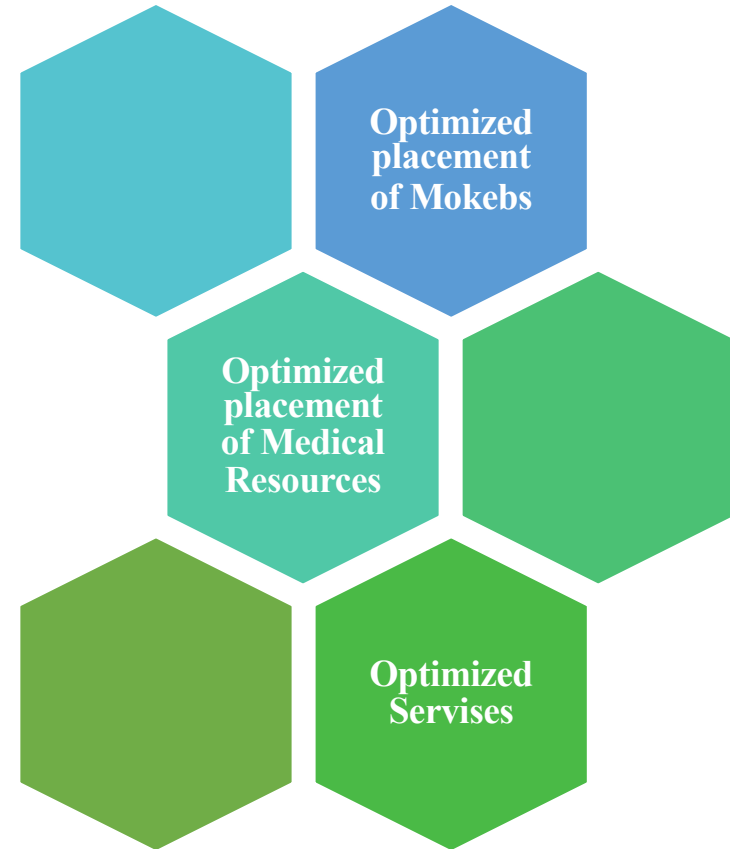
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## Aims

In Arbaeen Pilgrimage, the placement of medical Mokebs is critical to facilitate pilgrims' safe travel. Artificial intelligence has powerful tools for recognizing the optimized placement of Mokebs through optimization algorithms.





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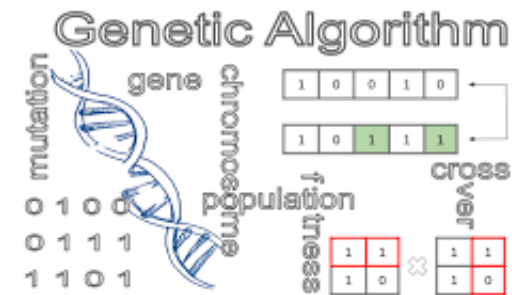
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## Materials & Methods

In this paper using a Genetic Algorithm we perform the optimized placement of Mokebs considering the main factors of the **Pilgrims population in the nearest way, distance to hospital, distance to health centers,** and amount of **budget** for medical Mokeb. Also, the online information of the place and medical services of each Mokebs in addition to the numbers of current Pilgrims in the Mokeb are announced to other Pilgrims on the way for their Mokeb Selection. Results show the merits of the proposed method.





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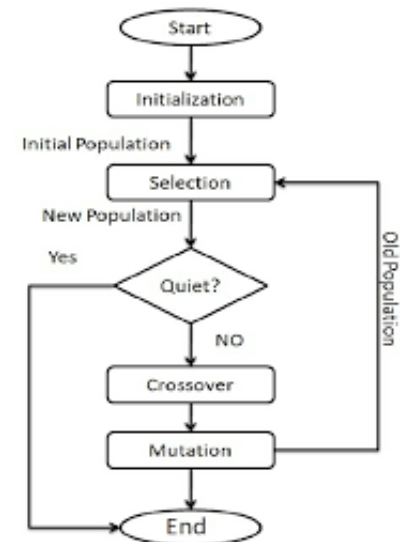
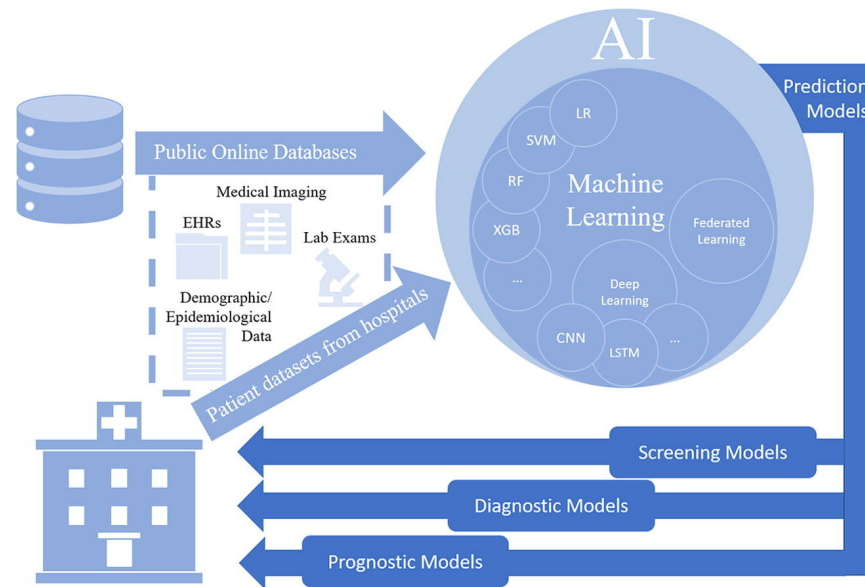
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## Materials & Methods

**Data:**  
Pilgrims population  
in the nearest way,  
distance to hospital,  
distance to health  
centers, and amount of  
budget





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## Results

This AI web-based system for Mokeb placement and selection recommender offers services both for medical staff and Pilgrims.

First, it offers the best placement for lunching medical Mokebs for medical staff considering the main factors of nearest way, distance to hospital, distance to health centers, and amount of budget for medical Mokeb.

Second, the result of the placement, along with the other required data for Mokeb selection is announced to Pilgrims according to their needs.



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## Results

In this case, Pilgrims visit medical Mokebs only according to their needs and there is an end to overcrowded medical Mokebs in one place and a waste of resources with no Pilgrims in another Mokeb.

It should be noted that in the next phase, the content recorded by the pilgrims and the treatment staff is considered a valuable data set, and it can be analyzed for better future decision-making in Arbaeen pilgrimage.

Also, the collected data of the smart Mokebs can be used further for any unnecessary multiple usages of the same medical services from different medical Mokebs by the same person.





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