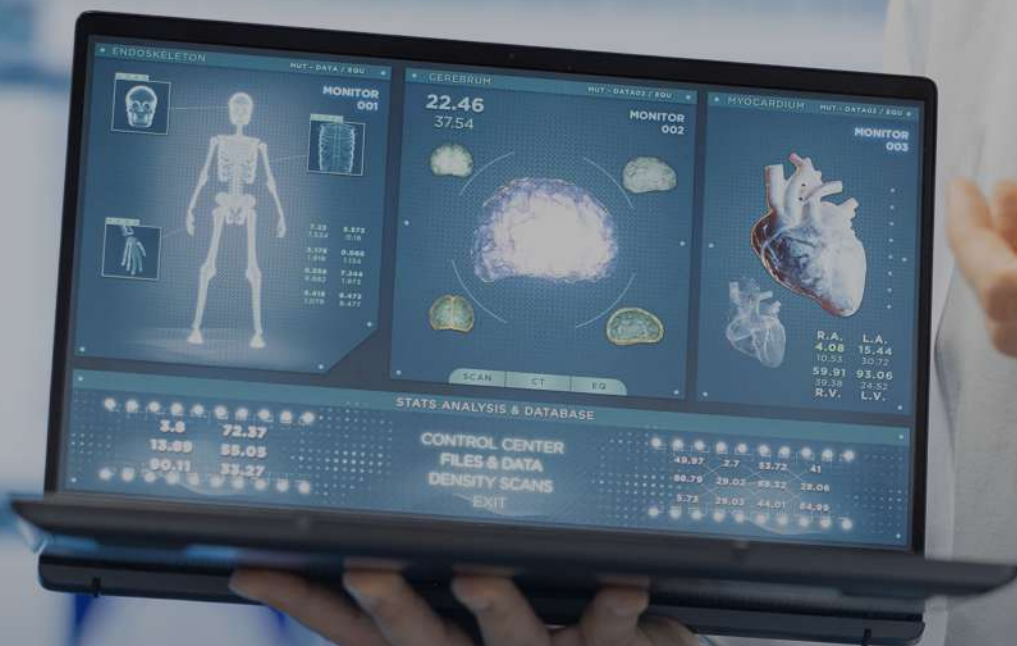# AIMEDIC
Shaping Future Healthcare

One of the largest marketplaces for medical image analysis in the Middle East.

About Us

The knowledge-based company and startup, AIMedic, aims to produce and develop creative products and solutions in the field of medicine through artificial intelligence. It was founded by a group of graduates from top universities in Iran. This organization considers its mission to be enhancing the quality of life for people worldwide, and to achieve that, it has harnessed artificial intelligence as a tool to achieve its goals.

Challenges in Medical Images

One of the fundamental challenges in utilizing medical images is the incorrect interpretation of images by physicians. Some medical images might provide inaccurate information due to incorrect or incomplete interpretation by physicians, leading to issues for the patient. Factors such as lack of physician experience, human errors, or insufficient access to information can contribute to inaccurate image interpretation.

Lack of Physician Experience:

Lack of physician experience is a significant issue in medical image interpretation, as it requires expertise that may not be available in all areas due to the high costs of medical training. This shortage can hinder patient care and prolong the diagnosis and treatment process.

Data Scarcity:

Data scarcity in medical images or CT scans can hinder accurate diagnosis, as insufficient information may prevent physicians from reaching a definitive conclusion.

Lack of Consistency Among Physicians:

Lack of consistency among physicians can result in varying interpretations of medical images. Each physician may base their conclusions on their own experience and knowledge, leading to potential inaccuracies and differing diagnoses.

Our Solution: Artificial Intelligence

To address challenges in medical image interpretation, we have developed a powerful AI model to support radiologists as a Clinical Decision Support (CDS) system. This initiative aims to enhance accuracy in disease diagnosis, and we will outline several benefits of using artificial intelligence in this field.

- High Accuracy • High Speed • Aid in Decision-Making
- Ability to Analyze Large Data • Access to Remote Areas
- Increased Healthcare System Efficiency and Treatment

In summary, using artificial intelligence in medical image diagnosis provides numerous benefits, such as high accuracy and speed, the ability to analyze large data volumes, enhanced decision-making, improved access to remote areas, and increased healthcare efficiency.wtith this method, we can achieve significant advancements in disease diagnosis, treatment, and overall public health.

70% FASTER

- Integration with existing hospital PACS systems.

- Wide coverage of medical images like brain CT and else.

- Capability to diagnose complex conditions like MLS fractures.

- Advanced artificial intelligence algorithms.

- High precision in simultaneous image inspection and analysis.

- Intelligent reporting of both image and text-based information.

DATA COLLECTION

DATA ANALYSIS

TRAINING & EVALUATION

DATA LABELING

DEPLOYMENT

MONITORING

MONETIZATION

MAINTENANCE & IMPROVEMENTS

AIMedic DS BREAST

One of the most important causes of death in women is breast cancer. Despite being dangerous, this cancer is very controllable; Provided that it is diagnosed early. One of the most important screenings performed by medical imaging, which significantly reduces the death rate of patients, is mammography, However, even with the reduction of mortality in this process, between 15 and %30 of cancers are not detected by mammography.

This product significantly increased the diagnostic accuracy of mammography images by using image processing system and artificial intelligence.

It is worth mentioning that underprivileged areas account for a large part of breast cancer due to the lack of facilities such as diagnostic tools; On the other hand, early detection of cancer with the help of new tools, including artificial intelligence technology, can reduce the death rate of people due to the disease by %98.

Product Applications

– Provides reports along with images of breast lesions.

– Enables rapid and highly accurate diagnosis of diseases and conditions that demand both speed and precision.

– Facilitates early and timely detection of breast cancer, a critical aspect that can potentially save lives.

– Enhances workflow in patient care and treatment

– Reduces medical errors and the likelihood of potential individual errors in patient treatment.

– Decreases costs associated with delayed diagnosis.

– Saves time and unforeseen costs for hospitals and healthcare staff, including physicians, while improving the healthcare system.

Model	AUC	Specificity	Sensitivity
Cancer Detection	0.92	0.94	0.87
Breast composition	0.90	--	--

AIMedic DS BRAIN

CT scan images are one of the most widely used medical diagnostic tools. AIMedic brain disorders diagnostic aid product helps doctors to make accurate decisions with less errors in a short period of time and under high work pressure conditions. On the other hand, this tool will help to provide facilities such as early diagnosis of diseases.

This product has been developed to automatically analyze and generate reports for medical CT scan images, and as an assistant, it helps radiologists diagnose brain complications as accurately as possible. AIMedic's CT-Brain product is a modular product that is fully compatible with hospital PEX systems and is currently providing services in one of the largest PEX service companies in Iran.

The product's advanced algorithms and machine learning capabilities enable it to detect even the slightest abnormalities in CT scan images, making it an invaluable asset for healthcare professionals.

Product Applications

- Provides reports along with images of brain abnormalities.

- Enables rapid and highly accurate diagnosis of diseases and conditions that demand both speed and precision, such as various types of brain strokes (ischemic, hemorrhagic, etc.).

- Facilitates early and timely detection of diseases, especially for conditions that require prompt diagnosis.

- Enhances workflow in patient care and treatment (optimizing the process from patient admission to treatment execution for individuals with brain strokes).

- Decreases costs associated with delayed diagnosis.

- Offers diagnostic and practical tools to physicians for more accurate diagnoses, such as precise volume calculation of brain lesions.

- Increases consistency across various departments within healthcare centers and aids in cost–effective and efficient utilization of resources (such as workflow improvement projects).

- Saves time and unforeseen costs for hospitals and healthcare staff, including physicians, while improving the healthcare system.

Algorithm	Sensitivity	Specificity
hyper-dense	0.914	0.828
hypo-dense	0.92	0.771
ICH	0.958	0.975

Detection Accuracy

Algorithm	Dice
hyper-dense	0.668
hypo-dense	0.525

AIMedic MedReporting

MedReporting is an advanced AI-powered solution designed to streamline and enhance the medical reporting process. Specifically tailored for radiologists, it allows users to generate reports efficiently using voice commands or a mouse, eliminating the need for manual typing. Integrated directly with PACS, MedReporting provides instant access to patient images, displaying AI-detected findings alongside the report creation interface. This approach optimizes clinical workflows and enhances decision-making accuracy, ultimately improving patient care.

MedReporting is the future of medical reporting, offering a solution that combines the benefits of AI technology, voice recognition, and seamless workflow integration. By reducing report generation time and enhancing the quality and accuracy of medical reports, MedReporting empowers radiologists to make more informed clinical decisions, leading to improved patient outcomes.

Key Features and Benefits

Faster Input

– Efficient Report Creation

– Guideline–Based Templates

– Seamless Workflow Integration

Improved Results

– Enhanced Report Quality

– AI-Driven Insights

– %60 Higher Decision–Making Precision

Seamless Integration and Accessibility

– Comprehensive Interoperability

– Flexible Input Options

How MedReporting Works

Voice or Mouse Input for Reports:

Radiologists can choose to generate reports using either voice commands or a mouse, making the process flexible and convenient.

Real–Time AI Findings:

As radiologists create the report, they have direct access to patient images on the same page. AI-powered analysis highlights findings and provides relevant annotations, ensuring that crucial information is available at a glance.

Integrated Workflow:

MedReporting connects with various systems such as PACS, RIS, and EMR, allowing for a unified and streamlined experience without disrupting the existing workflow. Reports are created and stored directly within these systems, ensuring ease of access and consistency.

AIMedic Tumor Segmentor

Our Tumor Segmentor is an AI-powered solution tailored specifically for GammaKnife procedures. It offers precise and real-time segmentation of tumors using advanced machine learning algorithms, enabling neurosurgeons and radiologists to visualize and target tumor boundaries with high accuracy.

By automating the segmentation process, our Tumor Segmentor reduces the time and effort required for treatment planning, allowing clinicians to focus on delivering more effective and personalized care to patients.

Additionally, the solution's high accuracy and precision help minimize the risk of radiation exposure to surrounding healthy tissue, improving overall patient outcomes. This leads to better treatment results, reduced side effects, and improved quality of life for patients undergoing GammaKnife procedures.

Coming Soon...

AIMedic DS Brain MRI

Our Decision Support (DS) system for Brain MRI is an AI-powered diagnostic tool designed to assist medical professionals in identifying and diagnosing lesions and diseases with high accuracy. By leveraging advanced algorithms, the system analyzes brain MRI scans in real-time, highlighting potential abnormalities and providing actionable insights.

AIMedic DS CT Angiography

Our DS system for CT Angiography is an AI-powered diagnostic tool that helps identify cardiac plaque buildup, providing critical insights for dental professionals. By analyzing CT angiograms, the system detects plaque in coronary arteries and assesses potential cardiovascular risks related to dental procedures.

AIMedic DS Dental OPG

Our DS system for dental OPG is an AI-based diagnostic tool designed to assist dental professionals in identifying tooth decay, gum disease, and other dental abnormalities. The system analyzes panoramic dental X-rays in real-time, providing accurate and actionable insights to enhance dental care.

AIMedic DS CT Spine Scans

Our DS system for CT spine scans is an AI-powered diagnostic tool designed to assist healthcare professionals in detecting and managing osteoporosis. By analyzing CT images of the spine, the system highlights areas with decreased bone density and provides critical insights into bone health.

AIMedic DS Lung CT Scan

Our DS system for lung CT scans is an advanced AI-powered diagnostic tool designed to help radiologists identify and assess nodules and masses accurately. By analyzing CT images in real-time, the system highlights and categorizes abnormalities, offering crucial insights that enhance clinical decision-making.

AIMedic DS Liver CT Scan

Our DS system for liver CT scans is an advanced AI-powered diagnostic tool specifically designed to assist healthcare professionals in the early detection and diagnosis of liver cancer. This system utilizes sophisticated algorithms to analyze CT images of the liver, helping to identify abnormalities and streamline the diagnostic process.

Active Centers

1 | Mazandaran: 3 center

2 | Hamedan: 2 center

3 | Qom: 7 center

Almedic AI solution service prices 2024

request/year	0–5000	5000-10000	10000-25000	>25000
Per study	2.5$	2.2$	1.65$	1.5$

other FDA approved AI applications

– MammoGraphy –

company	country	price
cmAssist	America	6 $
Genius AI	America	8 $
Lunit Insight	South Korea	12$
Mammoscreen	France	15$
Transpara	Netherlands	18$
Profiund AI	America	16$

– Brain Scan –

company	country	price
Aidoc	Israel	15$
iSchemaView	America	6 $
DeepHealth	Israel	8 $
Overjet	America	4 $
Scopio Labs	America	10$
Viz.ai	America	12$

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