

## Dr. Sina Bari, MD: Plastic Surgery and Al

OAKLAND, CALIFORNIA, UNITED STATES, June 28, 2023 /EINPresswire.com/ -- Artificial intelligence, more commonly known as AI, is powering the progress of many fields that have historically relied solely on human inputs. Among them, reconstructive <u>surgeon Dr. Sina Bari</u> points out, is plastic surgery.

What Is Al?

Although AI has become a hot topic in recent months, it has been an important topic in computer research for over 70 years.

In 1947, Dr. Alan Turing articulated his concept of machines capable of human thought processes. Research in the 1960s and 1970s brought AI to medicine in the form of the MYCIN system, developed at Stanford in 1972. MYCIN provided a differential diagnosis of a variety of bacterial infections, with a rank ordering of the likelihood of each infection and its recommended treatment. AI systems have evolved to encompass exponentially expanded data sets allowing for assessment and prognosis for scores of diseases. so many that many experts foresee a time in the near future when AI will play a role in nearly every diagnosis.

## Modern medical AI is made possible through:

Machine Learning. Algorithms uncover relationships in enormous data sets through pattern recognition among interacting variables. Learning may be supervised, made possible with a training set, or unsupervised, accomplished without a training set.

Deep learning. Machine learning can use artificial neural networks for enhanced predictive performance. For example, a convolutional deep learning system might assess the status of rhinoplasty from photographs, or a physician might load an image of the patient's skin to diagnose actinic lesions.

Natural language processing. There is also software —capable of non-Markovian analysis of human language. These programs are;t just about predicting which word comes next. They can answer preoperative questions taking patient history, previous communications, and medical data into account.

## Computer Vision for Plastic Surgery

Al has an increasing role in the practice of plastic surgery. Sixty seconds of high-definition video of surgery contains 25 times more information than high-resolution computed tomography. Al enables surgeons to make better-informed decisions even while they are working on their patients, and will be used to power robotic endoscopy and robotic surgery.

But none of these miracles is possible without training—training the algorithm, that is, not just training the physicians who use the technology.

## iMerit Trains Al

Reconstructive surgeon <u>Dr. Sina Bari serves as Senior Director</u> of Medical AI at iMeirt Technology in San Francisco, which helps the world's most innovative healthcare delivery systems train their AI systems. Under Dr. Bari's leadership, iMerit has become a leader in MLOps and large-scale data services for NLP use cases and computer vision, such as digital pathology, digital radiology, robotic surgery, robotic endoscopy, and document Ai.

A 2006 graduate of the Stanford University School of Medicine, Dr. Bari completed his residencies in plastic and reconstructive surgery and skin and soft tissue surgery at the Stanford Hospitals in 2012. He has practiced plastic surgery and served as a senior technology officer over the past 11 years.

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