

# HOW ARTIFICIAL INTELLIGENCE IS CHANGING THE AESTHETICS LANDSCAPE

**Wendy Lewis** looks into what practices need to know about the emergence of AI technology



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**‘A**LEXA, WILL ROBOTS EVER REPLACE aesthetic doctors?’ Although that seems fairly unlikely, artificial intelligence (AI) will certainly continue to impact the practice of medicine in many unforeseen ways that we have not even thought about yet.

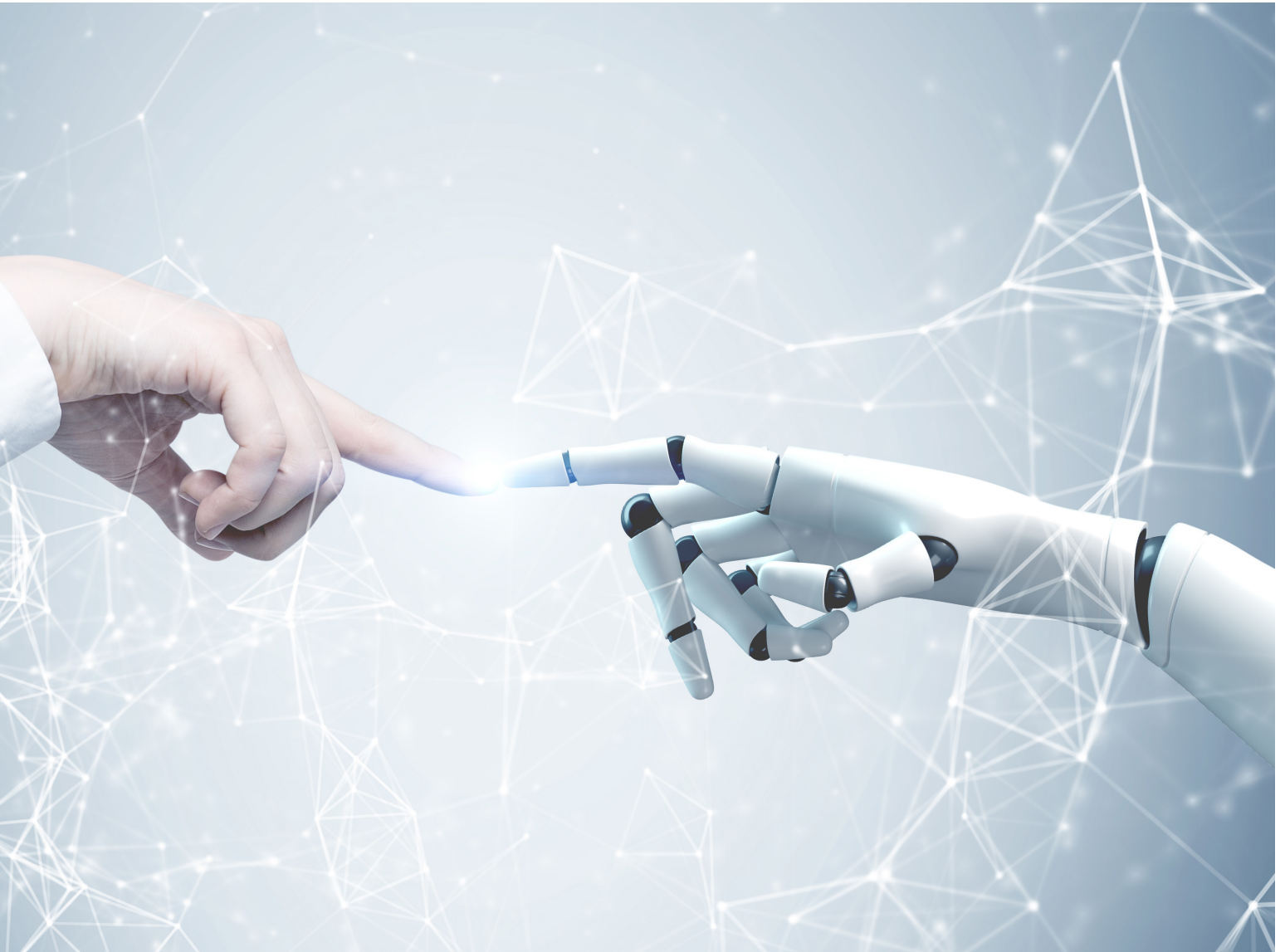
Here is a recent example. Amazon has teamed up with the UK National Health Service to offer people health advice through Alexa. Supposedly users will be able to ask Alexa questions such as ‘How do I treat a migraine?’ or ‘What are the symptoms of flu?’ An algorithm will then search the NHS website and respond with recommendations in an effort to reduce the workload for doctors by providing information for common conditions to patients. In this instance, AI is not being used as a substitute for treating patients, but rather as a means for disseminating basic information to patients.

Yet, this serves as real-world evidence of the inevitable rise of technology that will replace some human-performed tasks in the future. Tesla’s Elon Musk has warned about humans not being capable of competing with the development of AI. The more impending question is how soon this is likely to happen.

## Artificial intelligence in the medical field

Artificial intelligence in medicine refers to the use of AI technology and automated processes for gathering and analysing data, diagnosing and treating patients. Artificial intelligence may take over many of the arduous tasks now burdening healthcare professionals, and it may also eliminate a portion of the menial and repetitive tasks doctors and nurses hate the most. This will hopefully leave them with more time to spend with patients and perform treatments, and also to perfect their craft.

“40% of the jobs in the world are displaceable by technology.”



A lot of the most time-consuming aspects of practising medicine, including researching conditions, taking consultation notes, issuing prescriptions, ordering tests, making notations into charts, dictating operative summaries, keeping track of visits, and many more will be aided at least or even performed entirely by technology in the not too distant future. Advances in AI will revolutionise data management. Everything from collecting data, storing and mining it, to search capabilities will become faster and more efficient. Billing and collections may be facilitated entirely by machines, and far more accurately.

Another big plus is the potential to reduce waiting times by optimising scheduling procedures, appointment confirmations and changes. Artificial intelligence will ultimately outsmart the ability of humans to determine how much time is needed for each appointment.

Dr. Kai-Fu Lee, Chairman and CEO of Sinovation Ventures and President of Sinovation Venture's Artificial Intelligence Institute, predicts that it will not be long until A.I. algorithms can perform many of the diagnostic

#### 4 kinds of jobs that robots won't replace

- Creative jobs
- Complex and strategic jobs
- Empathetic and creative jobs
- 'As yet unknown' jobs (those that will become needed as AI continues to evolve).

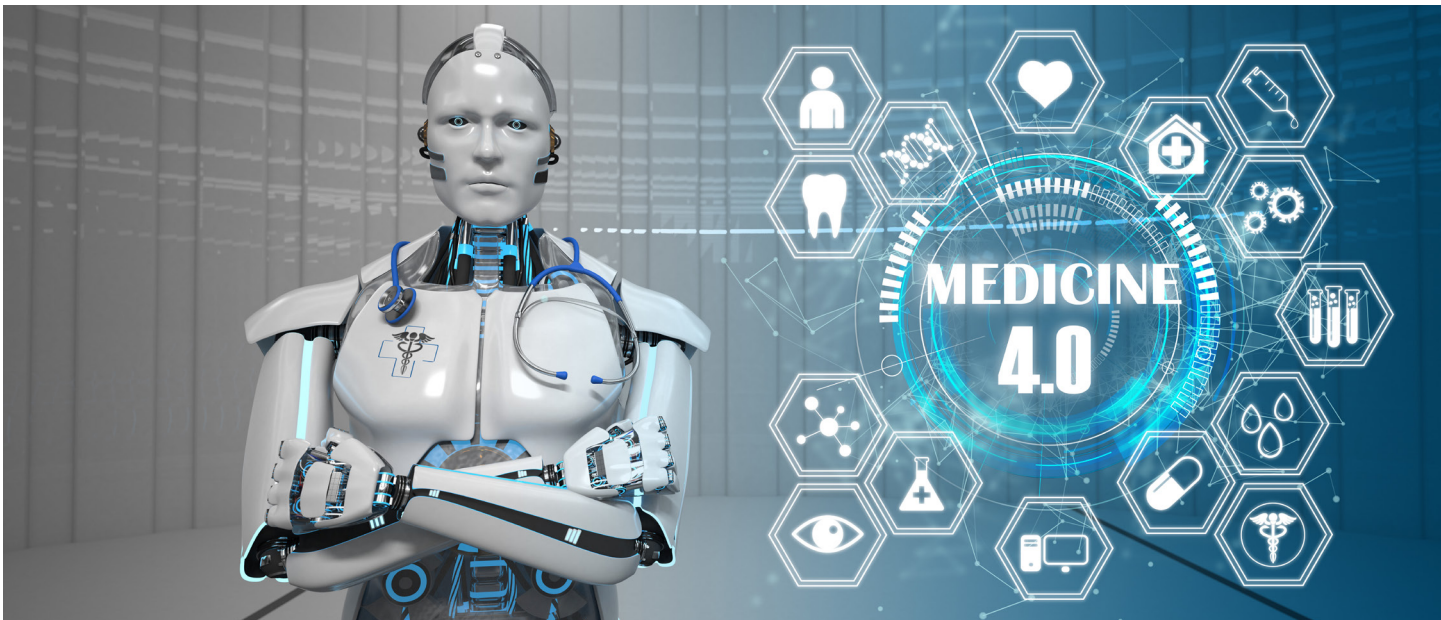
functions of medical professionals; "Those algorithms will pinpoint illness and prescribe treatments more effectively than any single human can. In some cases, doctors will use these equations as a tool. In some cases, the algorithms may replace the doctor entirely."

So, if you think about all the compelling advantages of A.I., you may be convinced to get on board. Rather than fearing the inevitable impact of A.I., perhaps we should be embracing these technological advancements and allowing them to, in turn, make us smarter, faster and better at our jobs.

#### Some jobs will disappear

Let's face it. We all live on our devices. Wouldn't you rather confirm an appointment via text than to have to take a call from your dermatologist's office, order an Uber on your phone to get your next peeling done, and pay your bill with Apple Pay?

Technology has been replacing many people's jobs for a long time. Automation increases efficiency and also ▷



▷ saves costs, which are the mantras of every business model and thus, it is inevitable.

So, as artificial intelligence continues to evolve and becomes even more intelligent, it is likely that some jobs will fade into obsolescence. '40% of the jobs in the world are displaceable by technology,' according to Dr. Kai-Fu Lee, in an interview on CBS 60 Minutes.

However, the jobs that are disappearing first are those that involve repetitive tasks, and heavy lifting that can be easily automated, such as food services, short-haul truck drivers, warehouse workers and delivery services. Still, even by Dr. Lee's prediction, that leaves 60% of jobs that will not be displaced by robots or algorithms any time soon.

### Humans vs. machines

Distinctly human abilities, including empathy, decision making, creativity, and critical thinking, cannot be replaced by machines alone. It is possible that these critical skills will become even more coveted in light of the increasing role of robots in our daily lives.

On another note, people don't always automatically trust machines. Alexa and Siri are not perfect either. Just think of how many times you ask for one thing and get something entirely different from your virtual assistant? While some of that may come down to human error or not asking the right question in the right format, human to robot communication also has its limitations.

**“Artificial intelligence has the potential to help aesthetic practitioners determine the optimal treatment plans for their patients. As precision medicine, targeted treatments, and personalised solutions become more in demand, AI can help to improve the patient experience by making it more user-friendly.”**

“Technology has the power to enhance our human function, but also poses a risk to replacing the core of what makes us human. Technology is changing the way our brains develop, process and respond to information, and affect our interpersonal relationships. Essentially, technology is altering what it means to be human.” - 2019 Capstone Research Paper.

### Why personalisation matters

Artificial Intelligence will be able to develop creativity and problem-solving skills, which can challenge humans' abilities. According to the 2019 Capstone Research Paper, “Through data tracking capabilities and artificial intelligence algorithms, personalisation is becoming more prevalent across many channels of business.”

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Aesthetic medicine will always maintain a level of customisation and personalisation because that is what patients expect and demand. It is not as straightforward in practice as administering a flu shot, treating a wound, or managing an infection. Artificial intelligence cannot replace what makes one aesthetic practitioner's ▷

### Beauty and technology

In June 2019, I attended the annual graduation of the Cosmetics and Fragrance Marketing and Management (CFMM) Master's Degree Program, School of Graduate Studies, Fashion Institute of Technology of the State University of New York, in New York City where the graduating class of cosmetics industry executives presented their 2019 Capstone research paper. Their thesis, 'Beauty and Technology,' explored the Fifth

Industrial Revolution, 'As our present day society is shaped by the advancements in technology, we cannot ignore its profound effects on our everyday lives and society as a whole. The technological achievements of today are only a foreshadowing of what is to come. It is undeniable that the Fifth Industrial Revolution, fueled by advancements in quantum computing, will be accelerated by technology at unprecedented

speeds. The need to be informed and actively aware of the potential of technology's power will require active education, collaboration and regulation for society to progress into a sustainable future.'... 'The unprecedented speed at which technology is changing requires humans to adapt quickly in order to participate in the modern world...By 2040 machine intelligence will outpace human intelligence.'



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## 5 ways to keep up with AI

**1** Get familiar with the potential benefits of AI and stay up to date with new developments; i.e. privacy, surveillance, data maintenance, encryption, etc.

**2** Keep your staff informed to avoid unnecessary concerns, fear or distrust.

**3** Consult with an attorney with expertise in digital to include the appropriate disclaimers on all patient forms and employee documents.

**4** Implement AI technology into your practice judiciously by enlisting expert IT consultants for assistance, and assigning a staff member to manage adoption.

**5** As AI continues to evolve, it will be necessary to invest in key employees through upskilling and retraining.



▷ technique unique. It is not only about having good medical judgment but also being able to read what the patient needs and wants and delivering the outcome they desire. The patient experience in each aesthetic practice varies greatly and is not necessarily interchangeable.

To date, AI has already improved the patient experience in many ways. Visual search is assisting patients in finding a provider by using Alexa or Siri to locate a practice that offers the services they are looking for in a specific area. Patients can also check the reviews and ratings of a practice they may be considering. Images and videos already play a significant role in aesthetic practices. They are vital tools for practitioners to identify problems and communicate solutions to patients, and to illustrate procedures and outcomes. Another advancement of utilising AI in medical aesthetics may be to track a

patient's history of treatments with other providers, since patients often tend to go from practice to practice. Personalisation of aesthetic treatments may hold the key to maintaining more long-term relationships with patients and higher patient satisfaction.

Artificial Intelligence is predicted by tech experts - and those who have a huge stake in it like Google, Facebook and Amazon - to improve our lives multifold. It may have the power to change everything we do and how we do it, which is why it is so important to stay informed as the next wave hits. However, robots will never be able to replace the core values and empathy that makes a good surgeon, skilled doctor or caring nurse.

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