



Your AI home

Love your house? In the future, it might love you back.
Welcome to the artificially intelligent residence of tomorrow...

Words **Tom Bailey** CGI visuals cloud9visuals.co.uk

Apple's latest smartphone, the iPhone X, contains some of the most advanced technology on planet Earth. But compared to tomorrow's artificially intelligent machines, it's just a souped-up pencil.

Of course, when most of us hear the words 'artificial intelligence' we immediately think of science-fiction films, renegade robots or the late Professor Stephen Hawking, who warned that when AI machines outsmart our squishy, biological brains, humanity will be toast.

But while 'evil AI' makes for thrilling Hollywood blockbusters, advances in machine learning are set to deliver huge benefits over the next 50 years. AI has already learned to drive, present a TV show, predict next season's catwalk trends and pick up a paintbrush (the first AI artwork, *Portrait of Edmond Belamy*, recently sold for £335,000 at Christie's).

Now, AI is trickling into our homes. Mostly in the shape of voice-activated personal assistants such as Amazon's Alexa. Using voice commands, it enables homeowners to switch off the lights, crank up the heating or change channels – without lifting a finger. Far from wrecking humanity, AI seems set to take over all the boring jobs – freeing up more time for family life.

Honda Robotics' empathy robot will offer humans comfort like a family pet



But as impressive as the likes of Alexa are, contemporary AI personal assistants lack one key ingredient: emotion. In the future, that's all going to change. Fast forward 20 or 30 years, and experts predict that AI homes will be so in tune with their owner they'll be able to tell their mood.

"Imagine a voice assistant, owned by you and operating on your behalf," says futurist and technology consultant Tom Cheesewright. "One that knows you so well because it picks up on your health data, it picks up on your social graph, it knows where you've been – it literally knows you inside out."

In the AI home of the future, he says, things will just happen around you automatically. "As you come home from work, your home knows you're approaching. The temperature is set appropriately, it knows your emotional state, it knows how hungry you are and when you last ate, it knows what your plans for the evening are, it knows what TV shows you like and whether new episodes have been released."

In short, an AI home will know you better than you know yourself. And more importantly, will create a healthier environment, designed to alleviate anxiety and stress. It all starts the moment you wake up, happy and refreshed, after a restful night in an intelligent bed. With temperature-balancing technology connected to sleep tracking and smart lighting, tomorrow's AI boudoirs will work tirelessly to keep you in a deep state of relaxation.

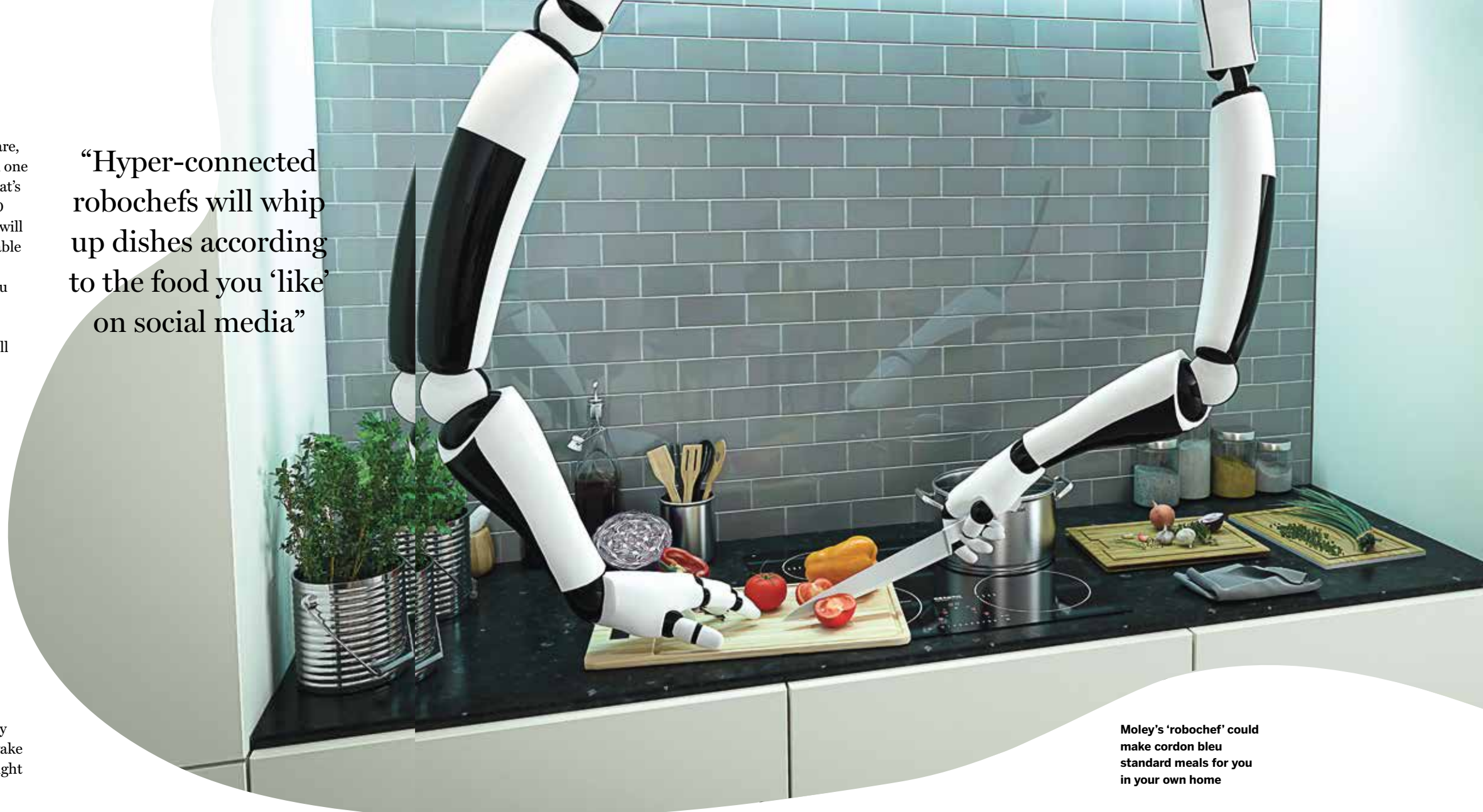
There may even be a 'dream controller' on your bedside table. This technology would record your dreams, allowing you to replay them in holographic form. You'll be able to download a new dream – much like you might download a film – to enjoy the next night. It sounds far-fetched, but scientists in the US have already built a dream control headband called Dormio, capable of stimulating brainwaves and thus influencing the content of a dream.

TAKING CARE OF YOU

On a more serious note, Cheesewright predicts that AI homes will not only monitor our health – but save lives. "One of the really good ways to understand what's going on inside your body is to analyse your waste," he says. "So in the future your smart toilet will be your doctor."

Assuming you get a clean bill of health, your AI wardrobe will ensure that you cut a dash. An intelligent mirrored surface will function as a personal style advisor, superimposing the latest fashions onto your body, taking precise inside leg measurements,

“Hyper-connected robochefs will whip up dishes according to the food you ‘like’ on social media”



and ordering bespoke garments to match your personality. By taking into account the weather and who you're meeting, every outfit will be thoughtfully tailored to the day's events.

While you're out, you can expect a fleet of robots to be hard at work. These high-tech helpers will bear little resemblance to today's gadgets, such as Barisieur, which brews coffee when you wake up, or FoldiMate, which folds your clothes. With liquid-smooth joints and emotion-detecting AI, future robots will care about us – rather than our crumpled laundry.

"Ultimately robots will become in tune with your feelings and understand your needs," says Pete Wendt of Honda Robotics. The Japanese car giant recently showed off four AI concepts designed to enrich our lives. They range from a rugged, four-wheeled 'gardener' that picks fruit with a nimble arm, to a compassionate 'empathy' robot that cares for families. It communicates with facial expressions and features a soft, huggable skin, making it safe in the event of a collision with a child. Like a very advanced Labradoodle, it aims to take the place of a family pet, tracking our moods and offering us comfort in stressful situations.

By the time you've arrived back home, your AI abode will have redecorated itself. Thanks

to advancements in LED wallpaper, Samsung predicts that tomorrow's AI homes will 'adapt your surroundings to your mood'.

Even your furniture will reconfigure itself to match your lifestyle. US start-up Ori recently launched the world's first 'robotic interiors'. The collection includes elegant, shape-shifting beds, bookshelves, desks and sofas that fold away – like origami – at the touch of a button.

Lost your keys? No need to fumble in your pockets. The AI home will be more secure than any CCTV system, locking and unlocking itself based on who's visiting (and, more importantly, why). Put simply, doorbells and keys won't exist. And thanks to your friendly AI front door, you'll never find yourself locked out.

After greeting your empathy robot with a hug, it'll be time for dinner. Science fiction nerds subscribe to the idea that humans will eventually switch to meal-replacement pills, but futurist Michael McQueen disagrees. Instead, he points to advanced robotics such as Moley's mind-boggling 'robochef'. Its super-sensitive robotic arms can julienne a carrot in the time it takes a microwave to ding. Once injected with AI, he predicts that

the next wave of 'hyper-connected' robochefs will learn their craft to cordon bleu standard, whipping up dishes according to the food you 'like' on social media.

Michelin-starred meals every night? It's a far cry from Hollywood's fearful scenarios. Welcoming AI into our homes looks set to make us safer, happier and healthier. Just

imagine: an AI smoke alarm that instructs robots to put out the fire. Or an AI fridge that works in sync with all your other tech, so your fridge is restocked when you come back from holiday.

Provided we teach AI machines right from wrong, they probably won't take over the world – just our chores.

