AI: More than Human is an unprecedented survey of creative and scientific developments in Artificial Intelligence, exploring the evolution of the relationship between humans and technology.

AI: More than Human presents new commissions and projects by artists, scientists and researchers Joy Buolamwini, Es Devlin, Mario Klingemann, Kode 9, Lawrence Lek, Massive Attack, Lauren McCarthy, Yoichi Ochiai, Neri Oxman, Anna Ridler, Chris Salter, Sam Twidale and Marija Avramovic, and Universal Everything.

The exhibition tells the rapidly developing story of AI, from its extraordinary ancient roots in Japanese Shintoism; Ada Lovelace and Charles Babbage’s early experiments in computing; to AI’s major developmental leaps from the 1940s to the present day to show how an age-old dream of creating intelligence has already become today’s reality. Told through some of the most prominent and cutting-edge research projects, from Deepmind, Jigsaw, Massachusetts Institute of Technology (MIT) Computer Science Artificial Intelligence Laboratory, Sony Computer Science Laboratories alongside the artists who are embracing its new possibilities in their work.

Artificial Intelligence is everywhere and nowhere. Often hard to see, AI has the potential to find its way into every aspect of our lives. It can be defined in different ways but fundamentally AI is the endeavour to understand and recreate human intelligence using machines.

AI: More than Human explores our fascination with technology and the centuries-old desire to advance science, expand intelligence, and extend life. As we use AI to understand our own existence, the boundary between ourselves and technology becomes harder to see. Technology is showing traits and qualities which seem like us. As we become ever more involved, the question arises — ‘where do we end and where does it begin?’.

The progress of AI is accelerating. It is driving huge shifts in how we live, how we relate to each other and how we perceive ourselves. As it helps to define our future, it may lead us towards new forms of life — some that we recognise and others that we don’t. This is both daunting and liberating. It invites us to consider a world where our intelligence is not the only one. A world where the possibilities for intelligence are more than human.
Quick Facts

<table>
<thead>
<tr>
<th>Hire fees</th>
<th>Upon application</th>
</tr>
</thead>
<tbody>
<tr>
<td>Duration</td>
<td>3 months +</td>
</tr>
<tr>
<td>Dimensions</td>
<td>approx 1,000 –1,500 m²</td>
</tr>
<tr>
<td>Duration of install/de-install</td>
<td>14 day install and 7 day de-install</td>
</tr>
</tbody>
</table>
| Number of staff travelling for install/de-install | 7 staff members (6 technical crew and 1 Exhibition Manager)  
6 technical staff for 14 day install and 7 day de-install, Exhibition Manager to oversee the whole install and de-install process.  
(Venue to cover cost of flights, accommodation, per diem, visas for all 7 staff members). |
| Transport | We request that one way (incoming) transport is covered by the venue.  
Transport for the exhibition is part sea, part air freight (estimated 4 x 40ft Hicube sea containers, palletised and crated). |

Venues

<table>
<thead>
<tr>
<th>Venue</th>
<th>Country</th>
<th>Dates</th>
</tr>
</thead>
<tbody>
<tr>
<td>Barbican Centre, London</td>
<td>UK</td>
<td>16 May – 26 August 2019</td>
</tr>
<tr>
<td>Groninger Forum, Groningen</td>
<td>Netherlands</td>
<td>6 Dec 2019 – 6 May 2020</td>
</tr>
<tr>
<td>World Museum, Liverpool</td>
<td>UK</td>
<td>10 July – 1 Nov 2020</td>
</tr>
<tr>
<td>TBC, Shenzhen</td>
<td>China</td>
<td>December 2020 – May 2021</td>
</tr>
<tr>
<td>Fernan Gomez, Madrid</td>
<td>Spain</td>
<td>22 July 2021 - 9 Jan 2022</td>
</tr>
</tbody>
</table>
People have always been intrigued by the artificial creation of living beings, whether through magic, science, religion or illusion.

This interest has expressed itself differently across civilisations, from the religious traditions of Shintoism and Judaism to the science of Arabic alchemy, ideas of the Gothic and early developments in mathematics.

By giving life to non-living things, people have explored their place in the world — sometimes feeling powerful, and sometimes feeling fearful of a world they can’t control.

This belief inspired attempts to create human-like figures with special abilities and to develop systems of intelligence that extend the mind. These two dimensions have driven the project of artificial intelligence to where it is today.
2 The Dream of AI

In a chamber containing stuffed animals, a globe and astrological devices, Hudibras, about to draw his sword, startles Sidrophel and Whacum. William Hogarth, 1768. Engraving.


Sunshower. Sam Twidale & Marija Avramovic, 2019

The ancient desire to recreate the workings of the brain through technology gained momentum in the 19th and 20th centuries. The early belief was that rational thought could be systematised and turned into formulaic rules. In the 1940s, this classic approach was transformed by the desire to not just decode the brain but mimic its workings.

By copying the behaviour of the brain’s own neurons, it was possible to develop the first ‘neural network’. Neural networks are computer programmes which self-improve over time. During the data explosion of the 2000s, they evolved to become the machine learning and deep learning that we know today. Technology that is able to teach itself can endlessly surprise us with its apparent creativity and its ability to see, hear and move.
3 Mind Machines

Installation shot with the Enigma machine, originally designed in c. 1944.


Left: My Artificial Muse/Face Feedback 2472. Mario Klingemann. 2018. Digital image, Neurography
Right: Robotic Arm (mockup). Denso Corporation. 2014. Chemical wood model

Installation shot with Triads Muse algorithmic music generator by Edward Fredkin and Marvin Minsky (1971-72) and interactive render of Minsky’s Tentacle Arm, with Alan Turing’s Bombe replica in the background.

Today, AI is used all around us, all the time, shaping our lives in public and private space, through the media we consume and the products we buy.

While we might be aware of some of AI’s manifestations, others are out of sight, entwined in global systems so complex that they are impossible to fully understand.

Data Worlds brings the reality of AI up close, by surfacing its hidden workings and opening up a future that is often exciting and sometimes disturbing.

This increasing proximity of AI raises ethical questions. Will our prejudices be amplified by the technologies we create? Who will be accountable for mistakes? How will AI affect privacy, freedom and truth?
4 Data Worlds

Seeing is Believing? Nexus Studios. 2019. Digital Interactive

Salem. Chris Salter in collaboration with Sofian Audry, Takashi Ikegami, Alexandre Saunier and Thomas Spier. 2019. Installation


LAUREN. Lauren McCarthy. 2017. Custom electronics, outlet, camera and switch


Affectiva Automotive AI. Affectiva. 2018. Multi-modal in-cabin AI
As AI permeates our lives, it merges with other scientific disciplines and begins to change our idea of the ‘natural’.

While AI emulates the behaviour of the brain, the related research area of artificial life (A-Life) works with a much wider set of natural processes, including human and animal biology, and environmental science.

This gives us the potential to improve our bodies, eradicate illnesses, produce new food groups and even extend life. It is possible to imagine both new futures for our species and the creation of new species.

In this scenario, organic life is an expanding process — our form is not fixed at birth. As new body parts, new living environments and new beings are created, it is clear that our world is in endless evolution.
5 Endless Evolution


6 Highlights

Created especially for AI: More than Human, Future You is an interactive installation that allows you to face your synthetic, future self. Watch the unique character learn from your movements and challenge it to keep up as you teach it how to jump and dance.

Universal Everything, Future You, 2019
Interactive video projection with sound

Explore the ground-breaking story of a computer defeating a human at the ancient strategy board game, Go. Use the interactive tool to understand how to play this complex game and experience the surprise that unfolded after the machine played unexpectedly at Move 37 of the second game in this historic match.

Deepmind, Move 37,
Created by The Workers in 2019
6 Highlights

Step inside the PoemPortraits installation to have your photograph taken and to donate one word to the evolving artwork. The chosen word, along with a word from a previous participant, is incorporated into a unique two-line poem generated by an algorithm and mapped onto your portrait.

Es Devlin, PoemPortraits, 2019
in collaboration with Google Arts & Culture and Ross Goodwin
Interactive artwork

Take a deep breath under the Resurrecting the Sublime installation to smell a flowering tree that has been extinct since 1912. The Hibiscadelphus wilderianus grew on lava fields in Hawaii but became extinct due to colonial cattle ranching. The smell of its flowers has been reconstructed by analysing DNA from a preserved plant.

Christina Agapakis, Alexandra Daisy Ginsberg, and Sissel Tolvaas, Resurrecting the Sublime, 2019
Smell installation and documentary film

A unique, commissioned timeline of AI invites a deeper dive into this complex subject. Explore the incredible stories of the men and women who shaped the history of AI. Use the touchscreens to select and read in detail or watch the highlights on the big screen.

Timeline
Created by The Workers in 2019
Interactive installation

See the world through the eyes of a machine with this real-time interaction developed for AI: More than Human. Learning to See mistakes ordinary objects under the camera for images of the beautiful seascapes and mesmerising galaxies that its neural network has learned from. Like us, the machine can only see as much as it knows and construct an image from expectations based on what it has seen before.

Memo Akten, Learning to See, 2017
generative adversarial network
7 Installation Shots

© 2019 Tonkin Liu

© 2019 Tonkin Liu

© 2019 Suzanne Zhang unless otherwise stated
7 Installation Shots
Installation Shots

© 2019 Tristan Fewings, Getty Images unless otherwise stated

© 2019 Tonkin Liu

© 2019 Suzanne Zhang

© 2019 Tristan Fewings, Getty Images unless otherwise stated
7 Installation Shots
7 Sample Marketing

AI: more than human

16 May – 26 Aug
An exhibition that explores the relationship between humans and artificial intelligence

Technologically fascinating and visually diverting
Evening Standard

Book now
Free for Members and under 14s
Open late Thu–Sat

Lead sponsor Media partners

Intricate 68%
Shirt: Smart 40%
Dark 54%
Hair: Natural 93%
Gaze: Strong 60%
Assertive 41%
Out of focus 33%
Neutral 88%
Raised Cheek: Confident 39%
Hat: Sentimental 73%
Curve 37%
Felt 29%
Smile: Subtle 77%
Brim 23%
Stubble: 3 Days 78%
Furrow: Wisdom 42%

16 May — 26 Aug
An exhibition that explores
the relationship between
humans and artificial intelligence
Produced by Barbican International Enterprises in collaboration with Groninger Forum.

Local sponsors

AI: More than Human Tour Pack

16 May – 26 Aug
Visit the Life Rewired Hub

Inspired by our 2019 Life Rewired season, this pop-up space hosts a programme of talks, workshops, performances and residencies all of which consider what it means to be human when technology is changing everything.

Check out the programme on our website.

Makr Shakr

Try a tipple from London’s first robotic bartender, that’s serving a variety of classic cocktails and mocktails all summer. The ‘More than Human’ cocktail is inspired by our new exhibition of the same name.

Located on the mezzanine by the shop entrance.

Barbican Chatbot

Does the rise of AI keep you awake at night? Talk to our More than Human chatbot to discover the impact AI is already having on our life and see whether you can spot the difference between AI and human generated art.

Chat at m.me/barbicancentre.

AI: More than Human Tour Pack

16 May – 26 Aug

An exhibition that explores the relationship between humans and artificial intelligence.

AI: more than human

This highly interactive exhibition could not be more topical - artnet

16 May – 26 Aug

An exhibition that explores the relationship between humans and artificial intelligence

AI more than human

 Until 26 Aug

An exhibition that explores the relationship between humans and artificial intelligence

Under 14s go free

Media Partner: Time Out