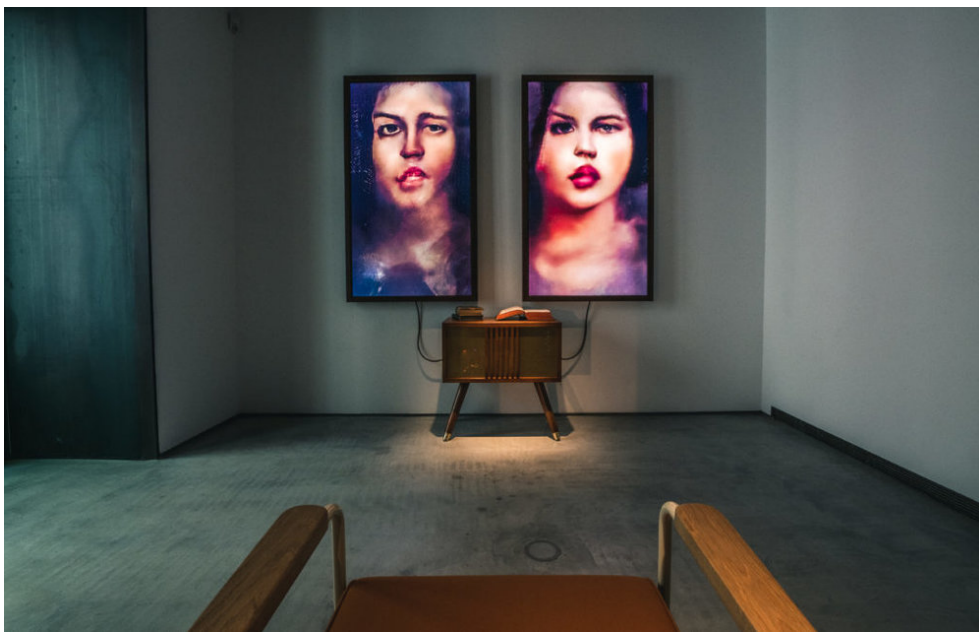




Mario Klingemann

Mario Klingemann is a leading pioneer in the AI art movement. He combines the analytic mind of a coder, the creative fervor of an artist, and a dash of mad scientist.



Mario Klingemann, *Memories of Passersby I*, 2018 © Courtesy of Onkaos

Bio

Klingemann is an award-winning artist and skeptic with a curious mind, whose preferred tools are neural networks, code and algorithms. He recently made headlines with the sale of his piece *Memories of Passersby I*, which was one of the first AI artworks bought in a traditional auction house (featured below). The art of that piece, he explains, is the code and system itself, rather than its continually evolving output on two screens - representing an important historical and conceptual landmark in the history of the art market.

Klingemann is driven by a deep desire to understand, question and subvert the inner workings of systems. He also has a deep interest in human perception and aesthetic theory. In order to surprise himself and his audience, Klingemann explores uncharted territories to discover unseen beauty and unthought ideas.

Klingemann's interests are constantly evolving, encompassing artificial intelligence, deep learning, generative and evolutionary art, glitch art, data classification and visualization, and robotic installations.

His work is often inspired by overcoming limitations, and creatively repurposing and recombining objects and systems to reveal their hidden qualities. His creations have been exhibited in international art shows and won acclaim among critics as exemplary pieces of net art. Pieces like his Neural Network portraits, Lowpoly Bot, Mona Tweeta, ScribblerToo, Flickeur, or Dada Visualization have made their way into uncounted best-of lists and got featured in many articles.

In 2015 he won the Creative Award of the British Library, currently he is machine learning artist in residence at the Google Cultural Institute in Paris. Mario enjoys sharing his explorations and discoveries on design and technology conferences worldwide, has co-founded the Munich FabLab and is working as a freelance code artist building creative tools, mobile apps and media installations.

Selected AI projects

1. Memories of Passersby I

Klingemann's work **Memories of Passersby I** generates portraits in real-time using neural networks. It is a computer system hidden inside of an antique-looking piece of furniture, which looks like a cross between a midcentury modern cabinet and an old-fashioned radio.



Mario Klingemann, Memories of Passersby I, 2018 © Courtesy of Onkaos

Klingemann says the art is not the images, which disappear, but the computer code that creates them. That makes it distinct from other pieces of AI art that have made it to auction—most of which consist of a single unchanging image generated by an algorithm.

The historic piece is a landmark in the history of AI Art because it is one of the first going up for auction in the traditional art market – and it is the *algorithm itself* that is the core of the piece. It's expected to sell at Sotheby's for an estimated \$50,000.

2. Neural Glitch

AI and computers have the ability to break us out of the confines of existing tradition. Klingemann explains:

"In the end, you are confined to what you have seen, heard or read, and it's very hard to glitch that. Some people take drugs to do that—to make even more absurd connections. But a machine enables

you to forcefully provoke that. Because it's much easier to glitch, or bring off course, than a human brain. In the process of doing that often some interesting things happen which are unexpected."

To that end, Klingemann developed a technique he calls Neural Glitch.

"Neural Glitch is a technique in which I manipulate fully trained GANs by randomly altering, deleting or exchanging their trained weights. Due to the complex structure of the neural architectures the glitches introduced this way occur on texture as well as on semantic levels which causes the models to misinterpret the input data in interesting ways, some of which could be interpreted as glimpses of autonomous creativity."

3. pix2pix Experiments with Electron Microscopy

Klingemann applies deep learning techniques in an attempt to discover new forms of aesthetics - and blur the lines between human and machine creativity. He has used image-focused neural network architectures since the release of Deep Dream.

Style transfer, ppgn, pix2pix and CycleGAN are architectures he has investigated and experimented with in an artistic context. Klingemann showed several of his "Neurographer" works at Ars Electronica 2017.

Klingemann is currently an Artist in Residence at Google Arts & Culture. He also helps institutions like the British Library, the Cardiff University or the New York Public Library with the processing and classification of their vast digital archives. He believes that his future creative agents will require a solid foundation of human knowledge to build upon.

Klingemann received the Artistic Award 2016 by the British Library Labs and won the Lumen Prize Gold 2018.

Mario Klingemann's Exhibitions

2019

- "Memories of Passersby I" at "Artificial Intelligence and Intercultural Dialogue", at The State Hermitage Museum, St. Petersburg, June 2019
- "NeuralGlitch" at "Augmented Humanity", Circolo del Design, Torino, June 2019
- "Interstitial Space" at ART-AI Festival Leicester, May 2019
- "79530 Self-Portraits", "The Butcher's Son" and "Neurographies" at "Automat und Mensch", Kate Vass Gallery, Zürich, May 2019
- "Circuit Training" at the Barbican, London, May 2019
- "Uncanny Mirror" at "Entangled Realities" show at Haus der elektronischen Künste, Basel, May 2019
- "Memories of Passersby I", "Mistaken Identity" and "X Degrees of Separation" at "Artistic Intelligence" show at Kunstverein Hannover, May 2019
- "Hyperdimensional Attractions: Sirius A" at CADAF, New York City, May 2019
- "79530 Self-Portraits" at "Gradient Descent", Galaxy Bengaluru, March 30th - April 13th 2019
- "79530 Self-Portraits" at Bundesministerium für Bildung und Forschung, Berlin, March 2019
- "Memories of Passersby I" at Sotheby's Contemporary Art Day, March 2019

2018

- "Mistaken Identity" at Beyond Festival, Karlsruhe, October
- "Uncanny Mirror" at Seoul Mediacity Biennale 2018, September
- "79530 Self-Portraits" at Ars Electronica Festival, September
- "X Degrees of Separation" at Przemiany Festival at Copernicus Science Centre, Poland, September

- “79530 Self-Portraits” at “Gradient Descent”, Nature Morte, New Delhi, August 17th – September 15th
- Kanikuly / 30° im Schatten, Farbenladen München, August 9th – 30th
- “79530 Self-Portraits” CogX – June 11/12 London
- “La Forme du non” neural sculpture model for Fabien Giraud & Raphaël Siboni, Fondation d’entreprise Ricard, Paris, May 15 – Jul 7
- “My Artificial Muse – World Tour“, collaborative performance with Albert Barqué-Duran and Marc Marzenit, Teatre de l’Amistat, Molerussa, Spain, May 12th 2018
- “X Degrees of Separation”, Open Codes, Goethe Institute, Mumbai, April 6 – June 2 2018
- “The Uncanny Photobooth”, Interactive Installation, TOCA ME Munich, March 3 2018
- 1542 – A Flood, for Fabien Giraud & Raphaël Siboni, Mona Tasmania, Feb 28 – June 17 2018
- “Neurographie”, Enjoy Complexity, Dortmund, February 23-25
- “Animaloculomataurus”, Installation for Klara Hobza, Soy Capitán, Berlin, February 2 – April 7 2018
- 1542 – A Flood, AI driven real-time generated movie for Fabien Giraud & Raphaël Siboni, Casino Luxembourg, Jan 27 – Apr 15 2018
- Neurography, Photographers’ Gallery, London, January 18th – March 13 2018
- Artificial Creativity, Boston Cyberarts, January 2018

2017

- NIPS Machine Learning for Creativity and Design Art Gallery, December 2017
- “Alternative Face”, Corrupting Data Show, Falmouth Art Gallery, September 2017
- “X Degrees of Separation” and “Alternative Face”, Ars Electronica Festival, September 2017
- “Genderification” Neural Portrait Series, Holon Institute of Technology, Israel, July 2017
- “X Degrees of Separation”, We Wear Culture, Metropolitan Museum of Art, New York, June 2017
- “My Artificial Muse“, collaborative performance with Albert Barqué-Duran, Sónar+D, Barcelona 14, 15, 16 June 2017
- “Pose-to-Picture” and “Genderification”, Machine Fiction, Cambridge, UK, July 2017
- “Alternative Face”, “Neural Abstracts” and “Pose-to-Picture”, Future Art Gallery, Shanghai, May 2017
- “Animaloculomat”, Installation for Klara Hobza, Museum für Naturkunde, April 2017
- “Pose-to-Picture”, Sensorium Festival, Bratislava, April 2017

2016

- Neural Portraits, Digital Asia Hub, Hong Kong
- “Is it Safe?” Installation and “Every Invader”, Science and Fiction Festival, Munich
- Deep Dream: The Art of Neural Networks, Grey Area Foundation, February 2016

2015

- “The Time of the Game” with Jer Thorp and Teju Cole, National Football Museum Manchester, May 2015
- “Anavision” – British Library Crossroads, June 2015
- “Ernst”, Science and Fiction Festival, Munich
- Commission for Knowledge Quarter, London

2014

- “Maximum Credible Accident”, UAMO Festival Munich, June 2014
- “Archives as Instigator” Workshop, MoMA, New York, April 2014
- “Das Leben der Dinge Die Dinge des Lebens” Data Visualizations. – Residenzschloß Dresden, April 2014

2012

- “Serendripty” Installation, TOCA ME, Munich

2011

- “Dada Visualization”, SHO Gallery, Cardiff, October 2011
- “Like This”, UAMO Festival, Munich

2009

- “Dada Visualization”, Data Art Show, Pink Hobo Gallery, Minneapolis
- “Twittbrett”, “Whatever Bubbles” TOCA ME, Munich

2008

- “Anaskop 1” TOCA ME, Munich
- “Flickeur” FILE 2008 Rio de Janeiro

2007

- “Flickeur” FILE 2007 Sao Paulo
- “Anavision” OFFF Barcelona

2006

- “Islands Of Consciousness”, Paraflows
- “Islands Of Consciousness”, Rhizome.org
- “Flickeur”, ART TECH MEDIA 06
- “Raycoaster”, OFFF Mexico

2004

- “Cityscapes”, Rhizome.org
- “Burning Liquid Sky” processing.org, June 2004
- Works with Processing, Museo de Arte Universidad Nacional de Colombia

2002

- Transnational Republic, Biennale “Big Social Game”, Torino