# A New Kind of Creativity - Artificial Intelligence for the Arts

## The AIFA (AI for Arts) conference kicked off our AI & Art events beyond the cultural year 2022

Artificial Intelligence and the algorithms associated with it are increasingly being used to paint pictures, write poems and compose pieces of music. At least that is how it seems when we look around in digital media, search for it specifically and watch recordings on YouTube. Whether Artificial Intelligence takes over the role of the human creative mind or is merely an artistic tool remains an open question. On the one hand, Artificial Intelligence-based algorithms are often "trained" on existing works by human artists (through Deep Learning), on the other hand they are merely "applied" in the sense of a technique. While artists such as van Gogh, Picasso, Shakespeare, Mozart, Beethoven and many others also created their works partly or perhaps even predominantly at night, in connection with extraordinary emotional states such as infatuation or suffering, it can certainly be said of Artificial Intelligence that it can produce art at any time of day. That is practical and profitable!

A much-cited example is the work of Obvious, a collective of researchers and artists working with AI algorithms. Some members of Obvious fed about 15,000 classic portraits into an artificial neural system (Deep Learning) and independently created a series of new portraits. From these, they selected some themselves and "founded" the "Belamy family", including a family tree spanning several generations. The painting of "Edmond Belamy" was eventually auctioned at Christies' for more than $400,000, almost twice as much as other auctioned paintings by Roy Lichtenstein and Andy Warhol combined. Pierre Fautrel, co-founder of Obvious, says: "Even if the AI artificially created the painting, it is up to us artists to calculate it and print it on canvas".

This is just one example of many. And although one can argue about the use of the techniques used and question the value of "artificial creativity", it shows that artists see AI as a tool with which they can experiment and work collaboratively. The use of AI here definitely leads to entrepreneurship, interesting experiments and creativity. At least that is how Taryn Southern, a pop artist who works with several AI platforms and has produced several music albums this way, sees it. She talks about the collaboration between humans and AI and says that she uses AI as a source of inspiration and that it still feels like her own work. Others think similarly: Ranjit Bhatnagar, for example, built his Pentametron in 2012, which is able to autonomously create sonnets in iambic rhythm based on Twitter messages. Bill T. Jones, choreographer and artistic director of New York Live Arts in Manhattan, New York, uses AI to run workshops on body, movement and language. Holly Herndon, an American artist from Berlin, describes her laptop as the "most personal instrument".

Perhaps you see art in combination with AI as critical and also lead the discussion about it controversially. Because not all of us can welcome this new kind of collaborative creativity. For some of us, art still means creating something with our own strength - without intelligent, computer-aided help. For others, however, creativity with tools is allowed and even explicitly desired. A new profession, so to speak! Perhaps it would be fair to introduce labels such as "Made by Human", "Made by Human & Machine" as well as "Made by AI" and thus recognise classic, pure handicraft? Is art really only what pleases, but also who made it?

From 28 - 30 September, the conference *AIFA - AI and the Future of AI* took place at the *Computational Creativity Hub* of the University of Luxembourg with more than 100 participants. The event was hybrid, so that interested people could participate both in person and virtually.  As part of the overall *'AI & Art Pavilion'* project, which will be shown as part of Esch2022 and is already shining its light, numerous experts from the interdisciplinary field of AI and the arts explored the increasing interactions between the two disciplines. They discussed a wide range of topics on developments, opportunities and also risks, the importance of creativity, the role of AI as a tool for the visual and performing arts, the use of AI technology itself, AI as a stimulating element as well as inspiration for the artist, and much more.

"We are very proud of the success of AIFA," says Sana Nouzri, a postdoctoral researcher at the Institute for Intelligent and Adaptive Systems (ILIAS) and one of the organisers of AIFA. She points out not only the importance of the interdisciplinary event for the field in question, but also the significance of this inaugural event for the University of Luxembourg. "I am very impressed by the quality and diversity of the presentations," says Leon van der Torre, one of the professors of Artificial Intelligence at ILIAS and Director of the RoboLab of the University. "Based on the response of the participants, and I'm not only counting colleagues and students here, but also our colleagues from Brazil, China and all over Europe, we will definitely continue AIFA as part of Esch2022 next year. Because we are increasingly noticing that the enthusiasm for the topic is growing and that we can become a centre internationally and nationally." Artist Egberdien van der Peijl and Yolanda Spinola, professor at the University of Seville, point to the artistic exhibitions accompanying the conference and say that AIFA was more or less a foretaste of what we can expect next year as part of our contributions to Esch2022 and in 2023, when the university will be 20 years old.

Where do we go from here? In November, we will organise the prestigious international science conference called BNAIC (see bnaic2021.uni.lu). This has been the reference conference for AI and Machine Learning in BeNeLux for 20 years now. This year, the annual conference will take place from 10 to 12 November at the Belval campus and will include scientific lectures and exhibitions as well as an industry day. One of several conference focal points will be the theme "AI and Art". Several keynote speakers will also punctuate the event with technical and in-depth contributions. As with AIFA, the event will be hybrid in nature. We expect up to 300 participants.

Our main project, the AI&Art Pavilion as part of Esch2022, is a multidisciplinary and interactive project initiative to bring together scientists, artists and the public to share ideas, drive innovation and counter criticism/fears. AI has already been continuously transforming our daily lives and some of the associated changes have the potential to reframe fundamental questions about humanity. The AI Pavilion consists of three main themes:

In the first thematic focus *Singularity 42!* we want to present initiatives in which artists think about the interaction between our physical and digital existence. By collaborating with us scientists, we offer high-level technical and scientific support for the realisation of art projects. Conversely, artists are constantly involved in producing blueprints for creative projects whose concepts require the artistic expertise of visual artists.

The *Cornerstone* theme offers visitors playful and interactive initiatives to experiment, discover and rethink their own beliefs. These projects are also - and perhaps especially - suitable for schoolchildren, as AI-based techniques are used to create an art product.

The *Magneto* thematic focus consists of various events that aim to inform and engage audiences in discussions about the role of AI.

For more information and a list of all projects, visit esch2022.uni.lu. The events are open to all interested parties. We look forward to seeing you there!

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