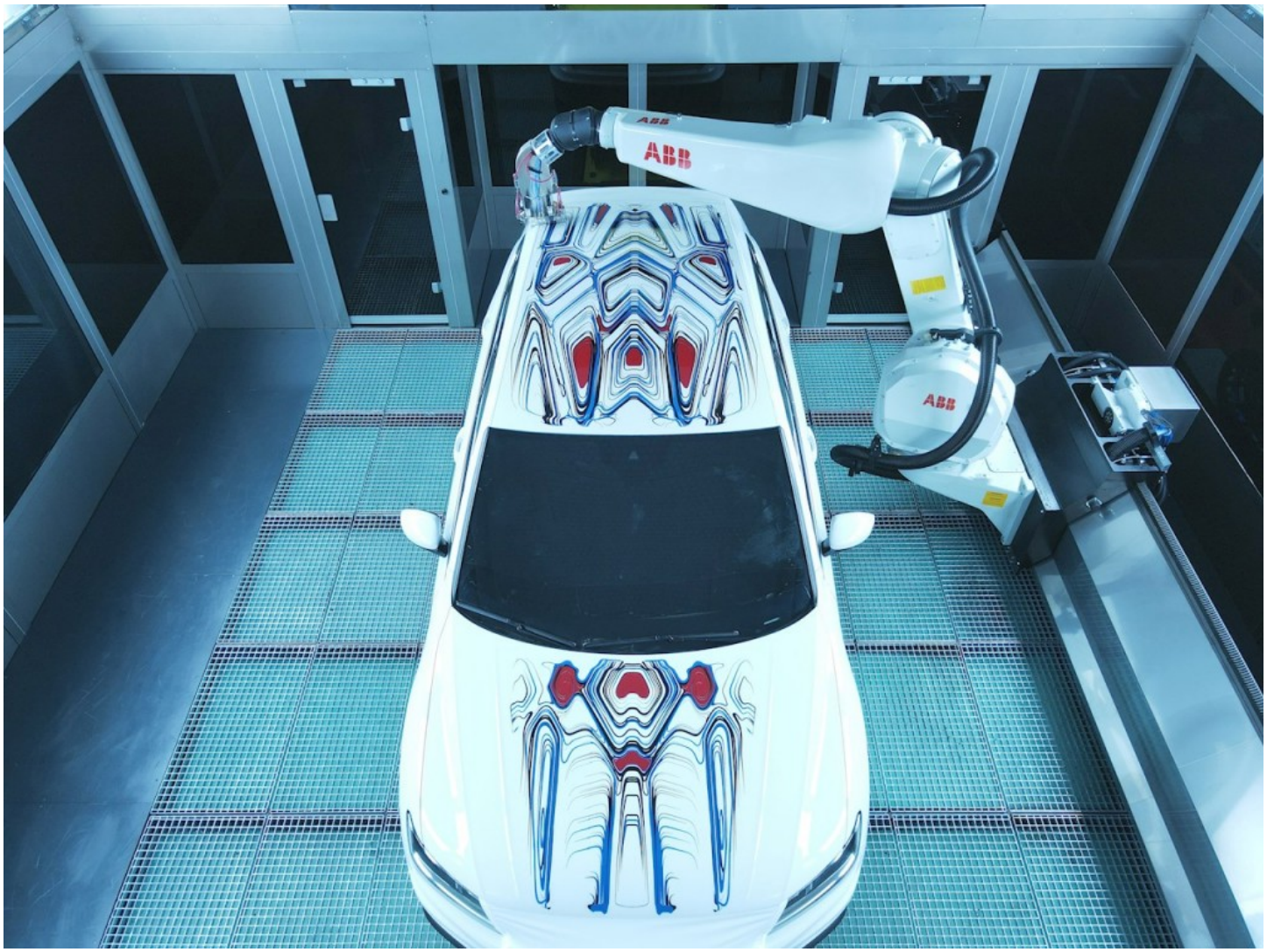
ILLUSORR Collaborates With ABB Robotics To Unveil World's First Robot-Painted Art Car



Richmond Hill, Ontario May 10, 2022 (Issuewire.com**)** - ILLUSORR collaborated with ABB Robotics on this groundbreaking project, for the world's first robot-painted art car, using their award-winning PixelPaint technology.

ILLUSORR created an AI-generated art piece for ABB Robotic's PixelPaint system, using genetic algorithms found in nature. These algorithms are informed by multiple parameters, including the speed and airflow around the car, created by the car's movement.

ABB Robotics' PixelPaint non-overspray technology allows digital/virtual/physical design and fabrication to be tested at the highest level. It was also in collaboration with the 8-year-old art prodigy Advait

Kolarkar, so it tests the range and flexibility of the robotic system, from monochromatic hand-painted novel art to complex tri-color geometrical patterns - and the robotic system executed perfectly on both ends.

The art piece was designed using HoudiniFX, a procedural modeling software, which allows algorithmic scripting to generate forms; a new methodology in avant-garde design. This new methodology allows you to use genetic algorithms, found in nature, to develop a multitude of variations that are fully adaptable. This artwork is highly influenced by the Perlin curl noise script to achieve the aesthetic and design language found in nature and biological proliferation. Once the desired morphology is generated using this script, it is then extracted and adapted to a form that the robotic system can understand and reproduce. The ABB Robotics technical team then mapped out a tool path based on these curves for the robotic system to produce efficiently. To achieve this, three different colors were used, and two primary parameters: were velocity and noise map.

This process further eliminates the time-consuming masking and demasking methods for two-tone painting in the automotive industry, and time/costs and therefore productivity, drastically increasing the efficiency. This as a result expands the capacities for customized schemes and the range of paint patterns and better achieves user needs.

Equipped with 1,000 nozzles in the printer head, ABB's IRB 5500 paint robots were able to complete the highly complex artworks in less than 30 minutes. The PixelPaint technology demonstrates unprecedented precision and speed, capturing intricate, elaborate detail that would be impossible to achieve by hand. A film highlighting this world-first achievement can be seen here.

Sami Atiya, President of ABB's Robotics & Discrete Automation business area, commented: "ABB's PixelPaint technology is more than an evolution – it is a revolution. It's a shining example of how robotic automation and our RobotStudio® software can not only pave the way for more sustainable manufacturing but can also perfectly replicate delicate pieces of art that celebrate the originality and beauty of the human spirit. At a time when consumers want more customized products, PixelPaint is a game-changer and allows any design to be replicated in a manner that is both sustainable and affordable."

ABB's ground-breaking PixelPaint technology reimagines the paint application process and reflects the growing demand for sustainable personalization in the automotive industry, particularly in exterior paint. Multi-colored car painting has traditionally been a laborious and costly process involving multiple stages of masking and unmasking, but ABB's technology allows for a detailed, colorful, and exact replication of any design.

Carefully controlled, the paint can be quickly applied in a single application. This breakthrough in the automation of the painting process opens the door to specialized and personalized designs for the automotive market.

Influential automotive designer, Ian Callum, responsible for the design of the Aston Martin Vanquish and more recently the ground-breaking Jaguar I-Pace said: “There’s something very special about a car. People get emotionally attached to them and the importance of personalization is becoming stronger and stronger. In fact, I’m working with customers who actually want the whole car designed in a bespoke way. So this paint offering – with all sorts of new levels of individual design for a motor car – is incredible.”

PixelPaint technology also enhances manufacturing sustainability, removing the need for masking materials and extra ventilation, which lowers emissions while saving water and energy. Coordinated by the firm’s RobotStudio software, the paint head tracks very closely to the vehicle body to ensure 100 percent of the paint is applied to the car with no airborne misting. Different paint colors are applied quickly, with the product only running through the paint shop once. For car manufacturers, this can halve the production time and reduce costs by up to 60 percent.

To create the art car, ABB refurbished a Volkswagen SUV that was damaged in the catastrophic floods in Germany in the summer of 2021. Its recycling confirms ABB’s commitment to sustainability wherever possible.

About ABB Robotics & Discrete Automation

ABB Robotics & Discrete Automation is a pioneer in robotics, machine automation, and digital services, providing innovative solutions for a diverse range of industries, from automotive to electronics to logistics. As one of the world’s leading robotics and machine automation suppliers, we have shipped over 500,000 robot solutions. We help our customers of all sizes to increase productivity, flexibility, and simplicity and to improve output quality. We support their transition towards the connected and collaborative factory of the future. ABB Robotics & Discrete Automation employs more than 10,000 people at over 100 locations in more than 53 countries.

About Advait Kolarkar

Only eight years old, Advait Kolarkar’s artwork is internationally acclaimed and is kaleidoscopic and abstract in nature. He employs different shapes, intricate designs, and bold splatters of intertwining lines. Advait has an exhibition of his collected works, including part of the ABB robot art car, in London’s Gagliardi Gallery between 12th and 22nd May 2022.

About ILLUSORR

ILLUSORR is the world's first design-oriented metaverse platform. Transitioning the physical world to the virtual world by creating unique spaces and experiences. ILLUSORR is reimagining the once fragmented virtual reality industry as an all-in-one platform offering a fully immersive metaverse experience. Accessible via PC, VR, AR, web, and mobile, it will offer customizable avatars, NFT marketplace, verification, social interactivity, home spaces, communities, retail, events, virtual estate, and much more.

In addition to building a metaverse platform, ILLUSORR Creation also helps brands, public figures, corporations, and government clients to transition to the metaverse, working with companies such as BMW, ABB, Unilever, and Hermitage Museum. The ILLUSORR Team is currently located in over 10 countries, across 4 continents - a diverse group of experts, delivering high-quality projects, connecting through the metaverse.

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https://www.illusorr.com/post/illusorr-collaborates-with-abb-robotics-to-unveil-world-s-first-robot-painted-art-car



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