

Aven
Le ZHOU
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Expertise

creative artificial intelligence; cultural innovation; digital media art and interactive technology, e.g., creative coding, physical computing, parametric and generative design, and digital fabrication.

Research

emerging technologies for creative practices. artistic AI, generative machine learning, and other emerging interactive media & interaction design.

Profile

Aven Le ZHOU is a professor, artist& entrepreneur works with creative Artificial Intelligence. He founded the AI-augmented creative studio - artMachines and leads cross-disciplinary practices in said organization. His artworks and research interests spread in interactive media, generative art and machine vision for creative interactions. He recently focuses on utilizing interactive artificial intelligence and generative machine learning to effectuate human-AI collaborative creativity.

Experience

Director & Founder, 2018-
artMachines. Shanghai.

Intel Software Innovator, 2019-
Intel Innovator Program. World-wide.

Artist, 2015-
works with emerging media. Shanghai.

Professor, 2015-
Xian Jiao Tong - Liverpool Univerisy& etc.

Art Residency

W International Art Project. 2018
PUDONG Media Group, Shanghai, China.

Interactive Media Art Resident Research Fellow. 2015-2019
NYU Shanghai, China.

Education

Ph.D. Computational Media Arts, 2022-2025
Hong Kong University of Science and Technology.

M.S. Multimedia & Telecommunication 2017-2019
University of Liverpool.

B.Arch. Architecture 2009-2014
Huazhong University of Science and Technology

Show Experience

His first solo exhibition "The Love of Shanshui" was held in Shanghai Duolun Museum of Modern Art. Some of his recent solo exhibitions include "Chinese New Literati, 2019. Shanghai World Expo Exhibition & Convention Centre, Shanghai", "Chinese New Literati, 2019. Shanghai Da Ning Library, Shanghai", and some selected group exhibitions include "Computer Vision for Fashion, Art and Design, 2019. Computer Vision Art Gallery, Seoul, Korean", "Dialog: a bit more AI, 2018. Fouhaus+, Shanghai", "SHANSHUIDaDA: A Platform to Design and Draw with AI, 2018. Yeah!Nah Gallery, Shanghai", "Machine Learning for Creativity and Design at NeurIPS, 2018. AI Art Gallery, Montreal".

Academic Experience

Aven teaches AI Arts, Computer Arts and Interactive Media Arts in various institutions. Most recently, he teaches AI Arts and Interactive Machine Learning at Interactive Media Arts Program at New York University, Shanghai (NYU Shanghai) and Computer Arts courses at Shanghai JIAO TONG University. Before that, he taught New Media Art major at WPP school, Shanghai Art and Design Academy from 2016 to 2018, and was a resident research fellow at NYU Shanghai from 2015 to 2019.

Note: A separate CV detailing academic experiences is available through request .

Exhibition

Machine Learning for Creativity and Design, 2019.12
AI Art Gallery, Vancouver, Canada.

Computer Vision for Fashion, Art and Design, 2019.11
Computer Vision Art Gallery, Seoul, Korea.

Chinese New Literati <SOLO> , 2019.09
The 88th Izmir International Fair, Izmir, Turkey.

Chinese New Literati <SOLO> , 2019.06
DaNing International, Shanghai, China.

Chinese New Literati <SOLO> , 2019.04
Shanghai World Expo Exhibition & Convention Centre, China.

The Love of Shanshui <SOLO> , 2019.01-02
Shanghai Duolun Museum of Modern Art, China.

Dialog: a bit more AI, 2018.12-19.02
Fouhaus+, Shanghai, China.

Machine Learning for Creativity and Design, 2018.12
AI Art Gallery, Montreal, Canada.

DaDA: A Platform to Design and Draw with AI, 2018.11-12
YeahNah! Gallery, Shanghai, China.

ShanshuiDaDA, 2018.10
Shanghai Maker Carnival, China.

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Selected Projects

Known Beauty. [不知侬是画中人], 08/2019. Known Beauty is a commission project by Tencent Next Idea Program. The idea is to transfer the selfie of a participant to the style of an art crafts (like ancient Chinese vases) and hide/emerge the result into the original piece. With the technology advancements in AI, we design and build softwares to bring the culture to live and present it with modern language, so to draw public's interests to the tradition. :: [link to web-page](#).

Fusion Beauty [湖湘画中人], 09/2019 - 12/2019. Fusion Beauty is an alike project as Known Beauty but applies to art-crafts from Hunan Provincial Museum. :: [link to web-page](#).

Distributed Creativity, 11/2019 - Present. Distributed Creativity is an experiment criticize the definition of creativity and how to approach it. The experiment runs as an artist workshop, in which the participants first learn the basics of Artificial Intelligence / machine learning and then driven by a set of guidance and rules to collaborate with other peer participants with the AI's assistance. None individual participant nor the AI or the artist is driving the creative process solely but every of us is complementary. The contributions are distributed, so are the creation and the creative process. :: [link to web-page](#).

The City of Love. [爱乐之城], 04/2019 - 05/2019. The city of love is an artificial intelligence powered performance project (April 2019 - Present) and a collaboration among four different organizations at the city of Shanghai, including Tong Ji University, Shanghai Conservatory of Music, Shanghai Institute of Visual Art, and New York University, Shanghai. The performer will play a laser Guzhen with the AI powered audio- visual system in duo. :: [link to web-page](#).

The Spirit of Shanshui. [山水精神], 01/2019. The Spirit of Shanshui is an interactive installation by which the participant moves in front of a Kinect camera and abstract geometries - symbolized mountain and water elements - will bump-up from their head, fall and bounce. This installation utilizes interactive visual simulation for entertainment, and to bring attention to concept of the spirit of Shanshui and encourage the eastern Shanshui painting tradition. :: [link to web-page](#).

Chasing You [追逐], 12/2018 - 01/2019. Chasing You" is an interactive installation with three individual parts. When audiences walk in front of / around the installation(s), the systems "see" and "track" their faces, and present the faces as a dynamic painting. Each sub-system equip with a face tracking unit to detect human faces and a display unit to present faces in visuals. This installation takes the initiative authority and grants the computer program the right to "chase" human and poses the question: Can machines own principal authority in the human-machine relationship? More details. :: [link to web-page](#).

Walking Through Shanshui [行走的山水], 01/2019. Walking through Shanshui" is an interactive installation based on AI and is dedicated to providing participants with a similar experience of creating Shanshui as in ancient times with various technologies. This piece seeks to honor the traditions and experiences that capture the graceful movements of travelers in natural spaces to create Shanshui, and attempts to mimic the traveling experience with walking in a room-size installation. :: [link to web-page](#).

ZICHI [子期], 11/2018 - 12/2018. ZICHI is an interactive musical AI. It is a musical intelligence who can "understand" the music from participants and compose new melody to play back with the tone of Guqin. When deep cultural heritage meets rapidly changing forms of art powered by technological advancements, this project is dedicated to building a creative and collaborative AI profile, where AI captivates the imagination to enhance creativity. :: [link to web-page](#).

Therem{ai}n [爱琴], 11/2018. Therem{ai}n is an artificial intelligence enhanced musical instrument/toy that responds, accompanies and inspires you. The participant will play the musical instrument as regular, the AI will generate new melody to play back in the tone of a theremin. This project is going beyond the novelty of an AI-based performance and homing in how in a world where AI is often seen as a replacement for jobs and production, that AI can accompany, assist, and respond to our creative process. :: [link to web-page](#).

ShanshuiDaDA [达达山水], 06/2018-10/2018. ShanshuiDaDA is an interactive installation that utilizes machine learning algorithm in helping amateur participants realize traditional Chinese Ink Wash Paintings. The audience is invited to sketch a simple line drawing representation of their ideal landscape painting, "ShanshuiDaDA" will generate a Chinese "Shanshui" based the user's input. This project seeks to find AI's role in traditionally human centered areas. By way of challenging the creator's conventional position, the artist poses the questions: Can we collaborate with AI to better facilitate, even enhance human creativity? :: [link to web-page](#).

Note: More details of projects can be found if click link at the end, or go to my website at: <https://www.aven.cc/>

Workshops and Talks

Invited Workshop: Create with Artificial Intelligence. OF Course Gallery, Shanghai, China. 01/04/2020.

Contributed Presentation: ZICHI. Machine Learning for Creativity and Design, NeurIPS, Vancouver, Canada. 12/14/2018.

Invited Talk: Create with Artificial Intelligence. Shanghai Tech University. Shanghai, China. 11/28/2019.

Invited Workshop: Create with Artificial Intelligence. Future Lab, West Bund Art Center, Shanghai, China. 11/25/2019.

Contributed Presentation: Can Machine Learning Algorithms Identify, Understand and even Confess with Human Emotion? The 5th Art and Science International Exhibition and Symposium, Beijing, China. 11/04/2019.

Contributed Presentation: Generate Chinese Shanshui Painting from Real-time Tracking of Human Position. Workshop on Computer Vision for Fashion, Art and Design, Seoul, Korea. 11/02/2019.

Contributed Presentation: A Responsive System that Generates Chinese Guqin Music from Real-time Human Input. IRCAM Forum, Shanghai Conservatory. 11/01/2019.

Invited Talk and Panel Discussion: Create with Artificial Intelligence. Shanghai Maker Carnival. Shanghai, China. 10/18/2019.

Invited Talk and Live Performance: The City of Love. Beauty of Uncertainty in the age of AI, Tongji Design Week, Shanghai, China. 10/14/2019.

Contributed Presentation: An Interactive and Generative Approach for Chinese Shanshui Painting Document. The 15th International Conf. on Document Analysis and Recognition (ICDAR) 2019, Sydney, Australia. 09/25/2019.

Interview: When Shanshui Meet AI. Interviewed by Youth Daily (Shanghai local press) with a full page report on my story of using AI create art. 09/15/2019.

Invited Talk and Panel Discussion: Create with Artificial Intelligence. Shanghai Science and Technology EXPO 上海科博会 . Shanghai Exhibition Center, China. 08/24/2019.

Invited Talk and Panel Discussion: Create with Artificial Intelligence. MTA Musical Festival. Beijing, China. 06/30/2019

Invited Talk and Live Performance: The City of Love. DaNing International, Shanghai, China. 06/27/2019.

Invited Talk and Performance: The City of Love. Shanghai Science & Technology Festival. Shanghai Science and Technology Museum, China. 05/23/2019.

Invited Talk: The Shanshui Nature Created by AI and US. Notes On Nature, Modern Weekly. Shanghai, China. 03/08/2019.

Contributed Talk: Creative AI, Collaborative AI, and Chinese Heritage. Processing Community Day. Shanghai, China. 02/24/2019.

Artist Guide Tour: The Love of Shanshui. Shanghai Duolun Museum of Modern Art, China. 01/26/2019.

Invited Talk: The Love of Shanshui. Shanghai Duolun Museum of Modern Art, China. 01/11/2019.

Invited Talk: Dialog: a bit more AI. Fouhaus+, Shanghai, China. 12/22/2018.

Contributed Poster Presentation: An Interactive, Generative Approach to Chinese Shanshui. Machine Learning for Creativity and Design, NeurIPS, Montreal, Canada. 12/08/2018.

Invited Talk: An AI Enhanced Musical Instrument that Responds, Accompanies and Inspires. Build For Digital Wellbeing, Google Dev Festival. Shanghai, China. 11/25/2018.

Invited Talk and Panel Discussion: How might AI Enhance Our Creativity? ZAOJIU Youth, ZAOJIU. Suzhou, China. 11/24/2018.

Invited Talk and Demo: TheremAI: A Musical AI can Response, Accompany and Inspire. Shanghai Google Developer Group. Shanghai, China. 11/17/2018.

Invited Talk and Demo: ShanshuiDaDA. PremiLab, Xi'an-Jiaotong Liverpool University. Suzhou, China. 11/09/2018.

Invited Talk: ShanshuiDaDA. Open Night, Mushroom Cloud Maker Space. Shanghai, China. 10/25/2018.

Note: Other undergraduate/graduate courses I have lead in different universities can be found on my website: <https://www.aven.cc/teaching>

artMachines

- start-up

b. Nov 2018

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www.artmachines.net

Expertise

creative artificial
intelligence; cultural
innovation; interactive
media arts.

Experience

interactive installation:

- screen-based installation
- physical installation through
machine vision & sensor

web application:

- wechat mini program
- interactive web-page

About

artMachines is an AI-augmented, artist-run studio and start-up focusing on the development of interactive and creative AI system to assist and empower human to create. Aiming at landing AI in the creative industry, artMachines roots in the interdisciplinary of art and science. Believing in “Create with Artificial Intelligence”, artMachines encourage and educate the society to embrace creative AI and share a common belief — In the era of Artificial Intelligence, everyone can create and be the artist!

Client and Project

**Tencent Ltd. & Hunan Provincial
Museum,** 2019.08-
Fusion Beauty. Wechat mini program

**Shanghai Jing'an Maker Development
Center,** 2019.04-09
Chinese New Literati. Exhibition.

Google (TensorFlow), 2019.05
TF2.0 powered ShanshuiDaDA. Screen-
based Installation.

Intel Ltd., 2019.04
OpenVINO powered ShanshuiDaDA.
Screen-based Installation.

Shanghai Duolun Museum, 2019.1
The Love of Shanshui. Exhibition.

Pudong Media Group, 2018.11-19.1
ZICHI. (physical) Interactive Installation

Google Developer Group Shanghai, 2018.11
TheremAI. (physical) Interactive
Installation.

Award

1st prize, Tacent Next Idea Competition.

winner, Google PoweredByTF 2.0 Challenge.

1st prize, Intel AI On PC Early Innovation.

1st prize, GDG Shanghai Design Sprint Hackthon.