Tianjun Wang

王天君

Personal Website: tiaanjun.com

Email: tw2135@nyu.edu I Phone:(+86)18813062716

EDUCATION

Interactive Telecommunications Program, New York University   Sept. 2019 - May 2021
One of the Top3 master's programs in interactive technology and media in the United States
Core Courses: Connected Devices and Network; Device to Database; Web Real Time Communications; Understanding Network; Dynamic Web Development; Live Web; Machine Learning for Web; Experiments on Augmented Reality; Physical Computing; Computational Media; Application on Interactive Telecommunication System

School of Architecture, Tsinghua University   Sept. 2014-July 2019
Ranked the No. 1 architecture school in China, with an admission rate of 0.2%
Bachelor of Architecture，GPA: 3.68/4.00, involved 22 credits in Physics

Core Courses: Architectural Design; Urban and Landscape Design; Residential Planning and Housing Design; Form Composition; Design Practice in Institutions; Fundamental Principles and Experiments in Physics; Advanced Algebra; Advanced Calculus

PUBLICATIONS

Re-perceive 3D printing with Artificial Intelligence   September 2019
Education and Research in Computer Aided Architectural Design in Europe and XXIII Iberoamerican Society of Digital Graphics, Joint Conference, Porto, Portugal
https://www.proceedings.blucher.com.br/article-details/34199

Interactive bionic swarming installation   May 2018
Poster published at the 23rd International Conference of the Association for Computer-Aided Architectural Design Research in Asia (CAADRIA) 2018.
Abstracted the swarming reaction of jellyfish according to three natural laws and simulated it with Grasshopper in Rhino and physicalized into robots.

SELECTED AWARDS. EXHIBITIONS. & SCHOLARSHIPS

August 2019.	New York University Graduate Scholarship
May 2019	State Scholarship Fund of the P. R. China
July 2018	Art Book China 2018
Dec. 2017	BI-city of Biennale of Urbanism/Architecture in Shenzhen

PROFESSIONAL EXPERIENCES

Tiktok, Technical Infrastructure   **Shanghai, China**
Cloud Platform PM   Aug. 2021 - Now
Product manager in SaaS cloud platform direction. Specialized in building DevSecOps service for the developers. Design and conduct the product case about artifact supply chain, identity access management and building pipeline for cloud computing scenarios.

Tiktok, Enterprises Service   **Beijing, China**
Data visualization PM   Aug. 2020 - Jan.2021
Product manager internship in business intelligence BI direction of enterprise service SaaS products. Combine business scenarios, sort out data logic, carry out data definitions, write product requirements documents, and promote the implementation of product solutions, including BI reports and data visualization.

Kohn Pedersen Fox Associates   **Shanghai, China**
Assistant Architect   June 2018 - Aug. 2018
Conducted interior design for the 700,000 square meters urban complex—Dongjiadu Project. Completed enlarged view drawings, clarified the detailed construction drawings by working on complex modeling of the connecting points.

X-Studio, Academy of Arts and Design, Tsinghua University   **Beijing, China**
Research Assistant   Mar. 2018 - June 2018
Co-created an experimental human-field interaction project; specifically in charge of the hardware design and spatial design.

SKILLS & TOOLS

Engineering:
• Programing language: JavaScripts and C#
• Tech Stack:
  • Frontend：JavaScripts, WebGL, Three.js, P5.js, Node.js,CRUD, AJAX, HTML5 and CSS
  • Backend：building web server using node.js, cloud infrastructure architect, SQL
  • Communication: Peer to peer connections using websocket, IoT communication(MQTT, WiFi and Bluetooth)
  • Database building and SQL, basic machine learning using Ml5 platform

Product Management & UX: Research, Product Design, Interaction Design, Prototyping, Data Visualization, Figma, Jira, Adobe Photoshop, Illustrator, InDesign
3D & AR: AutoCad, Rhinoceros with grasshopper, Sketch Up, Cinema4D, Unity, Vuforia
Film and Animation: Shooting, Adobe Premiere, After Effects

RESEARCH EXPERIENCES

Web Real-Time communication platform embedded with Live 3D scenes and physical interaction
May 2021- Mar. 2021
- This project built a virtual space embedded with 3D scenes for video meeting, synthesized with chatting, games and IoT control. It aims to explore the dilemma of online communication with more context provide by communication medium.
- The system has the following features:
  - Peer-to-peer connection for chatting and video meeting
  - User can move, rotate and floating in the sea; resize or rotate to adjust view point
  - User can playing with each other in the 3D scenarios (leave his marks, collide with other users, etc.) and interact with objects in that scenario.
  - Adjusting virtual environment from the physical data sent from Arduino using WiFiNINA.
- This project was my thesis project of master degree and the full stack was designed and built by me.

Smart Home System based on MQTT Light Control and Machine Learning API
May 2020- Mar. 2020
- It was an **IoT** system research project using Phillips Hue Light API, ML 5 API and MQTT protocol; its aim was to explore the synchronization of different physical spaces in home system.
- The system can tell the movement of the user, and tigger the light system. Also, the user could control his light system from any corner of the world using this web platform and watch the real-time reaction from the platform.
- The web platform and communication part was build by me. Also I made a light fixture with Arduino and motor to simulate the liquid caustic reflection.

Research on the Spatial and temporal Characteristics and Application of Interactive Narrative
Mar. 2018- June 2018
- It was an associated **human-field interaction** research project with Alibaba (China's e-commerce giant); its aim was to explore new forms of interactive narrative using big screen and multi-screen technology
- I referenced the proxemics behaviors of users in the physical world to influence the storyline in the fictional world; designed an interactive big-screen installation to explore the mapping relationship between the narrative space and the physical space. In this installation, people are not only audience members towards the motion graphics that appear on the big screen but are also users who can interact with the story world through their behaviors.
- The users' feedback in the exhibition verified the feasibility of our attempts, which we could synchronize the development of plots in narrative space with the natural behaviors of the users in physical space

Dynamic material computation based on machine learning.   Sept.2018- Dec.2018
- Aimed to establish a mapping relationship between printing parameters and the form of the products.
- To prepare the materials for training samples, we reassembled a new 3D printing machine, which is capable of automatically generating formatted data, including printing a specific shape according to G-codes, taking photos of the printed shape, re-moving it and starting a new one. Following this, we started training the neural network for a material performance model.
- After the model was validated we embedded Grasshopper into the system to deconstruct a specific form into printable units, then tried to print various forms using material computation