GUANGYU DU

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My interest lies in the hybrid of the physical and digital world. Beyond architecture, I also design spatial and temporal experiences through computational and interactive media. I believe the emerging responsive and immersive environments will help us consolidate memories, awaken emotions, build relationships, thus forges long-lasting social connections.

EDUCATION

Harvard University, Graduate School of Design, Cambridge, MA
Master in Design Studies (MDes Technology), May 2020
Courses: Computational Design 1 & 2, Data Visualization, Computer Graphics, Data Structures and Algorithms, Computer Vision, Immersive Landscape, Digital Media: Ambience, Responsive Environments, Public Projection, CS50

Massachusetts Institute of Technology, Cambridge, MA
Cross-registered, 2019, Courses: Intelligent Multimodal User Interfaces Artificial Intelligence, Architecture in Motion Graphics

Tsinghua University, School of Architecture, Beijing, CHINA
Bachelor of Architecture (B. Arch), Outstanding Graduate, Class of 2017, Future Scholar Fellowship. Coursework: Architectural and Urban Design, Parametric Design, Media Calculation and Artistic Expression

EMPLOYMENT

Data Visualization Specialist, MIT Senseable City Lab
Cambridge, MA, Aug 2020 - Present, Full-Time
Collaborate with scientists to identify research questions, write storyboards. design and prototype (front-end) data visualizations and platforms, compose animations and videos.

Research Assistant at Office For Urbanization, Harvard GSD
Cambridge, MA, 2020 Spring, Part-Time
Design digital workflows for generative urban design in the form of a web interface and backend algorithms (including DCGAN, Pix2Pix, StyleGAN).

Teaching Assistant for Computational Design, Harvard GSD
Cambridge, MA, 2019 Fall, Part-Time
Host office hours for SCI6338 Introduction to Computational Design (67 students), guide student projects on Rhino & grasshopper, Unity & C#, Web & JavaScript, Processing, P5.js, D3.js. Organized student projects final review.

Software Engineering Intern, Microsoft Research Asia
Beijing, CHINA, 2019 Summer, Internship
Developed a new mixed reality Unity showcase for HoloLens 1 & 2. Incorporated Azure Spatial Anchor and ASP.NET web application for sharing persistent experience across devices. Created 3D assets and programmed MR interactions.

Architectural Intern, Robert A. M. Stern Architects
New York, NY, 2016 Summer, Internship
Assisted in the development of House in Skaneateles Project. Revised and produced detailed design drawings and schedules, created the CAD sheet set for the Design Development Phase.

SKILLS

Computational Design Rhino | Grasshopper | C#
Data Visualization d3.js | deck.gl | JavaScript | HTML/CSS | React + Redux
3D Graphics Three.js | OpenGL C++ | Blender | Cinema4D | Substance Painter
Game Engine + MR Unity | C# GLSL | HoloLens + MiexedRealityToolkit
Creative Coding Processing | P5.js
Algorithms Python | NumPy | SciPy | OpenCV
Architectural Design Rhino | SketchUp | AutoCAD | V-Ray | Maxwell
Adobe After Effects | Premiere | Photoshop | InDesign | Illustrator

PROJECTS

Rocinha Favela - Invisible Cities in LiDAR
MIT SCL. Urban morphological spatial pattern analysis. WebGL.

Sensing Lights - Digital Urban Intelligence Platform
MIT SCL. Streetlight infrastructure as a digital urban platform. Blender.

Xenolith - Me in My Virtual World
MIT SA+P, 2019 Fall. Mixed reality experience built with Unity and Adobe Premiere, mixing human subjects into surreal virtual worlds.

Efface - Gaze Interactive Computational Landscape
Harvard GSD, 2019 Spring. An interactive world programmed in Unity with C#, GLSL Shader, and Tobii Eye-Tracking API. Users explore and change the colors of the landscape through gaze interaction.

Engram - Immersive Virtual Landscape
Harvard GSD, 2018 Fall. A virtual world designed in Cinema4D and Unity for an immersive experience of flying over an imaginary land.

Loneliness: A Social Story - Interactive Data Visualization
Harvard SEAS, 2019 Fall. Web data visualization with JavaScript, HTML/CSS, D3.js, Three.js. Harvard CS171 “Best Projects” Fall 2019.

Evolving Decay - Computational Olympic Park Design
Tsinghua School of Architecture, 2017 Fall. Parametric urban design with Rhino, Grasshopper, and Python, based on chaotic systems.

CaveArch - Intelligent Interactive Spatial Design Interface
Tsinghua Department of Computer Science and Technology, 2016 Fall. Led a three-person team on ideation, research, and coding (python, C++) on intelligent Interface for interactive spatial design.

EXPERIENCE

New England Graduate Media Symposium 2019
Displaying Artist, displayed Unity project Engram.

Harvard Innovation Lab Connect Program 2019
Participated in the Harvard i-Lab Connect Program 2019 for venture Journey (Web Application), which was granted $2500 AWS credit.

MIT Hacking Arts 2018
Awarded MIT Hacking Arts 2018 Wayfair’s Prize and Fritz’s Prize for Agora, an AR Art platform for creating and sharing location-based art.

Intelligent Building System Research
Tsinghua School of Architecture, 2016 Fall. Conducted robotic gripper design research, coded robotic arm demo for getting industry funding.

XWG Archi-Studio, Beijing, China
Computational Design, 2017 Fall. Participated in Sunshine Kaidi Industrial Park Project Schematic and Development Design Phases.

Beijing Design Week, Beijing, China
Installation Design, 2016 Fall. Assisted in the structural design of *Swarm Nest*, an interactive project at the Baita Si Design Exhibition.