

# GUANGYU DU

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My interest lies in the hybrid of the physical and virtual world that helps forge long-lasting social connections. Beyond architectural design, I also explore spatial and temporal experience design through computational and interactive media. I believe the responsive and immersive environments, part of the emerging technologies, has brought new opportunities for consolidating memories, awakening emotions, and building relationships through collaborative interactions with the augmented physical world and shared explorations in imagined virtual world.

## EDUCATION

### Harvard University, Graduate School of Design Cambridge, MA

Master in Design Studies (MDes Technology), anticipated 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 in 2019: Intelligent Multimodal User Interfaces, Artificial Intelligence, Architecture in Motion Graphics

### Tsinghua University, School of Architecture Beijing, CHINA

Bachelor of Architecture (B. Arch), GPA 3.95/4, Outstanding Graduate, Class of 2017, Future Scholar Fellowship. Coursework: Architectural and Urban Design, Parametric Design, Media Calculation and Artistic Expression

## SKILLS

**Computational Design** C# | Python | Rhino | Grasshopper  
**Data Visualization** JavaScript | HTML/CSS | d3.js  
**Interactive Media** C# | Unity | Cinema4D | C++ | OpenGL | Three.js  
**Algorithms** Python | NumPy | SciPy | OpenCV  
**Adobe** After Effects | Premiere | Photoshop | InDesign | Illustrator

## EMPLOYMENT

### Research Assistant at Office For Urbanization, Harvard GSD Cambridge, MA, 2020 Spring

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

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

Developed a new mixed reality 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

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.

## PROJECTS

### Xenolith - Me in My Virtual World

Harvard GSD, 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 GSD, 2019 Fall. Web-based data visualization with JavaScript/HTML/CSS and D3.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, which was granted \$2000 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.