GUANGYU DU

www.dugyu.com
dugy.guangyu@gmail.com

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
2018-2020, Coursework: Computational Design, Data Visualization, CS50, Computer Graphics, Data Structures and Algorithms, Computer Vision, Immersive Landscape, Responsive Environments, Public Projection

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

Tsinghua University, School of Architecture, Beijing, CHINA
Bachelor of Architecture (B. Arch), July 2016 *5 years program completed in 4 years*
2012-2016, Architectural Design, Beijing Outstanding Graduate, Class of 2017
2016-2018, Future Scholar Fellowship, Graduate-level Parametric Architectural and Urban 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 on the built environment and human mobility, 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
Designed digital workflows for generative urban design, proposed web interface components and backend algorithms.

Teaching Assistant for Computational Design, Harvard GSD
Cambridge, MA, 2019 Fall, Part-Time
Hosted office hours for SCI6338 Introduction to Computational Design (67 students), guided 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 Rhinoceros 3D | 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 | HoloLens + MixedRealityToolkit
Algorithms Python | NumPy | SciPy | OpenCV
Architectural Design Rhinoceros 3D | SketchUp | AutoCAD | V-Ray | Maxwell
Adobe After Effects | Premiere | Photoshop | InDesign | Illustrator

PROJECTS

Wanderlust - Universal Human Mobility Patterns
MIT Senseable City Lab, 2021. Interactive web visualization on the research *The univesral visitation law of human mobility,* published in Nature. Developed a new scheme, 3D Impressionism, for visualizing recurrent mobility flows and spatial clusters of attractive urban places.

Favelas 4D - Invisible Cities in LiDAR
MIT Senseable City Lab, 2021. Research and visualization on scalable methods for analyzing urban morphology of informal settlements (Rocinha as an example) using terrestrial laser scanning data. Media Coverage: Designboom, Dezeen, CNN Brazil, EL PAÍS.

Efface - Gaze Interactive Computational Landscape
Harvard GSD, 2019. 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.

Loneliness: A Social Story - Interactive Data Visualization
Harvard SEAS, 2019. Web data visualization and storytelling with D3.js, Three.js. Harvard CS171 "Best Projects" Fall 2019.

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

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

Evolving Decay - Computational Olympic Park Design
Tsinghua SoA, 2017. Parametric urban design with Rhino, Grasshopper, and Python, based on differential equations and chaotic systems.

CaveArch - Intelligent Interactive Spatial Design Interface
Tsinghua DCST, 2016. Led a three-person team on ideation, research, and coding on intelligent interface for interactive spatial design.

EXPERIENCE

Cornell Data Journal Tech Talk 2020
Guest Speaker, Topic: creative coding and data visualization.
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.
XWG Archi-Studio, Beijing, China
Architectural Design, 2017. Participated in Sunshine Kaidi Industrial Park Project Schematic and Development Design Phases.
Intelligent Building System Research
Tsinghua SoA, 2016. Conducted robotic gripper design research.
Beijing Design Week, Beijing, China
Installation Design, 2016. Assisted in project *Swarm Nest*.