

# YU Shiqi

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## EDUCATION

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**Northeastern University** Boston, USA  
*PhD Student in Interdisciplinary Design and Media* Sep. 2024 -

- Research: Human-computer interaction (HCI), Extended reality (XR), Healthcare.

**University of Edinburgh** Edinburgh, UK  
*M.S. in Design Informatics - School of Informatics* Sep. 2021 - Nov. 2022

- Research: Human-computer interaction (HCI), Extended reality (XR), Data Visualization.
- Thesis: An Immersive 3D Visualization of Medical Data in HoloViz Office Advise by Benjamin Bach

**Beijing Language and Culture University** Beijing, China  
*B.ENG in Digital Media Technology- School of Information Science* Sep. 2017 - Jul. 2021

## PROFESSIONAL EXPERIENCE & RESPONSIBILITIES

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**Northeastern University** Boston, USA  
*Research Assistant – Teaching with XR in Higher Education* Sep. 2024 -

- Supporting long-term integration of XR technologies into graduate education through platform evaluation, research synthesis, and pilot experience design for the MS in Creative Technologies program.
- Conducted stakeholder interviews to identify pedagogical needs, curricular gaps, and XR opportunities across disciplines.
- Performed a structured literature review of 40+ peer-reviewed studies on XR implementation in higher education (2020–2025).
- Built a comparative analysis of XR platforms (e.g., Engage, Spatial, VRChat) for classroom use, highlighting strengths, limitations, and use cases.
- Synthesized insights to inform the design of pilot XR classroom experiences focused on remote lectures and collaborative project work.
- Advised on implementation strategies including platform selection, student interaction models, and faculty training considerations.

**Cranfield University** Bedford, UK  
*Research Fellow in XR- School of Aerospace, Transport and Manufacturing* Apr. 2024 - Aug. 2024

- Contributed to the *Faraday Battery Challenge* and Innovate UK's *DEBUT-WM project*, developing XR training solutions for automotive battery manufacturing.
- Collaborated with University College Birmingham, University of Warwick, and RAVMAC Ltd to create VR demos showcased at the *Battery Cells & Systems Expo and Cenex Expo 2024*.
- Conducted XR research, produced publications, managed project tasks, and coordinated with industry partners to deliver practical outcomes.
- Supported funding proposals and supervised students, fostering academic and technical development.

**University of Greenwich** London, UK  
*XR Software Developer - School of Computing and Mathematical Sciences* Apr. 2023 - Apr. 2024

- Participation in the Social and Human Centered XR (SUN) project, a European Union-funded project that aims to integrate the physical and virtual worlds through XR.
- Develop a testbed for conducting cyberattacks on XR.
- Develop an intrusion detection mechanism that can detect cyber threats to XR.

## RESEARCH

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### **Non-Occlusive XR for Older Adults with KOA: Improving Adherence & Pain Management via Wearable Sensors**

Boston, USA

*Researcher & Developer*

*Jan. 2025 -*

- Designing see-through XR solutions combined with wearable biofeedback and exergames to support older adults with pain management and exercise adherence.
- Collaborating with interdisciplinary teams to ensure user-friendly interfaces and validate clinical outcomes.

### **Pediatric AR/VR Companion for Reducing Children's Anxiety**

Boston, USA

*Researcher & Developer*

*March. 2025 -*

- Developing child-focused AR/VR applications that incorporate age-appropriate storytelling to reduce anxiety during medical visits.
- Conducting user testing with pediatric populations to refine experience design and measure emotional support outcomes.

### **XR Security Testbed: Crafting Attack Scenarios for Privacy Protection**

London, UK

*XR Software Developer & Research Team Lead*

*Apr. 2023 - Apr. 2024*

- Pioneered an XR security testbed to address the need for privacy threat research in XR. Utilized the platform to demonstrate and analyze four significant privacy attacks, showcasing the testbed's capabilities for developing and testing security measures. (Oculus Quest, HoloLens, Unity3D)

### **An Immersive 3D Visualization of Medical Data in HoloViz Office**

Edinburgh, UK

*Developer*

*Jan. 2022 - Aug. 2022*

- Demonstration of the functionality of the interactive workspace by displaying medical 3D data in the HoloViz Office. (HoloLens, Magic Leap, Unity3D)
- Postgraduate thesis supervised by Dr. *Benjamin Bach*

### **Text-based Dynamic Video Generation for Virtual Reality Scenes**

Edinburgh, UK

*Developer*

*Jan. 2022 - Apr. 2022*

- Developed 'TIV' (Text-Image-Video), a framework for converting text descriptions into dynamic VR scene videos, enhancing immersive virtual experiences. (TensorFlow)

### **Virtual Reality (VR) for Nutritional Awareness Research Project**

Edinburgh, UK

*Lead Researcher & Developer*

*Jan. 2022 - Apr. 2022*

- Orchestrated the research and development of an immersive virtual reality application, known as *FALLING MANNA*, designed to enhance dietary self-tracking and engage users with Scottish food culture. (Oculus Rift, Unity3D)

### **HCI Research for Health Services Data Management**

Edinburgh, UK

*Developer*

*Jan. 2022 - Apr. 2022*

- Developed a sophisticated Student Health Services Data Management application, advancing data security and user interaction paradigms within the healthcare education sector.

## Accessibility-Oriented Cartography Research with PATTERNMAP

Edinburgh, UK

Developer

Sep. 2021 - Dec. 2021

- Pioneered accessibility research and developed *PATTERNMAP*, a web platform that employs colorblind-friendly design, leveraging *Google Earth Engine* and *EarthBlox* for secure and inclusive geospatial data representation.

## HCI-Driven Post-traumatic stress disorder (PTSD) Therapy Innovation

Edinburgh, UK

Developer

Sep. 2021 - Dec. 2021

- Spearheaded an HCI-focused research initiative to create *Dream Controller*, a conceptual therapeutic aid designed to ameliorate sleep disturbances in PTSD patients. Emphasized rigorous research methodologies to inform product design, emphasizing empathetic user engagement and secure, private data protocols.

## MISCELLANEOUS

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- **Domains Covered:** - XR & Machine learning & Game development (project experience); 3D animation production (modeling experience); Video and image processing (simple project experience)
- **Programming** - Project experience in Python (moderate) & C# (moderate); C/C++ (basic)
- **IT Skills:** - Unity3D (proficient) & 3ds Max (moderate, project experience); Adobe After Effects & Adobe Audition (average); MATLAB (basic)
- **Language** - English (fluent); Mandarin (native)