

# YU Shiqi

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## EDUCATION

### University of Edinburgh

Edinburgh, UK

*M.S. in Design Informatics - School of Informatics*

*Sep. 2021 - Nov. 2022*

- Courses taken: Design with Data, Data Science for Design, Machine Learning Practical, etc.
- Research: Human-computer interaction (HCI), Extended reality (XR), Data Visualization.

### Beijing Language and Culture University

Beijing, China

*B.ENG in Digital Media Technology- School of Information Science*

*Sep. 2017 - Jul. 2021*

- Average: 86.0/100
- Excellent Cadre of Student Union (3% awarded); Individual Scholarship for Professional Studies (5% awarded) & Social Work (5% awarded)

## RESEARCH

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

London, UK

*XR Software Developer & Research Team Lead*

*Apr. 2023 - present*

- 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.

**Scene Generation Algorithm Implementation with Unity3D** Beijing, China  
*Developer* *Dec. 2020 - Apr. 2021*

- Algorithm for generating paths
- Implement algorithm into the 3D maze scene generation (Unity3D, C#)

**Interactive Campus Navigation System Research** Beijing, China  
*Research Team Lead* *Sep. 2018 - Sep. 2019*

- Guided a research initiative to design an interactive 3D campus map model, integrating advanced search and navigation features, to facilitate spatial orientation and architectural visualization studies. (3ds Max, Unity3D)

## PROFESSIONAL EXPERIENCE & RESPONSIBILITIES

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

- 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.
- Advised by Prof. *George Loukas*

**Creativity World Forum & DC Living Lab** Stuttgart, Germany  
*Developer* *Jul. 2022 - Jul. 2022*

- Collaborated within a team to tackle Sustainable Development Goals (SDGs) challenges and presented solutions to the challenge stakeholders.

**Google Developer Student Club** Edinburgh, UK  
*Events Organizer* *Nov. 2021 - Jan. 2022*

- Academic event planning (talks, workshops, socials)
- Outreach to the public and to club members

**Youth4Climate to UN Framework Convention on Climate Change Cop 25** Beijing, China  
*Volunteer* *Nov. 2019 - Apr. 2020*

- Facilitated negotiations with local businesses for the coordination of promotional events.

**World Without Borders-International Volunteer in Bali** Bali, Indonesia  
*Volunteer* *Aug. 2019 - Sep. 2019*

- Coordinated a group of more than 10 volunteers to deliver educational programs for students in the local community.

**Council of Associations- Beijing Language and Culture University**

Beijing, China

*Sponsor Coordinator @ Public Relations Department*

*Sep. 2017 - Sep. 2018*

- Coordination and communication of events: Cheongsam Competition-Coordinator & Siwei Cup Debate
- Negotiating financial support contracts with merchants.

## **INVITED TALKS AND PANELS**

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**Social and Human Centered XR Third Plenary Meeting**

Valencia, Spain

*Presenter*

*Nov. 2023*

- Presented a demonstration and discussion of XR security project.

## **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)