

**Carle Illinois College of Medicine
Senior Visiting XR Developer**

Senior Visiting XR (Extended Reality) Developer will be responsible for leading the design and development of cutting-edge extended reality (XR) immersive educational experiences that leverage virtual reality (VR), augmented reality (AR), and mixed reality (MR) technologies. Working closely with educators, medical professionals, and other developers to design and develop XR applications that enhance medical education, training, and research. Provide mentorship, and guidance and facilitate growth for the XR and simulation staff, student volunteers, faculty, and community members. This position requires the development and submission of high-quality research for publication in journals as well as actively engaging in preparing and delivering presentations at conferences.

Development and Design

- Architect, Lead, and Design, XR applications, simulations, and experiences that cater to the unique needs of medical education, training, and research.
- Plan and implement porting strategies to expand offerings to new platforms and hardware.
- Collaborate with medical educators, researchers, and subject matter experts to understand their requirements and translate them into effective XR solutions.
- Create user-centered XR experiences, considering usability, accessibility, and interaction design principles to ensure that the applications are intuitive and impactful.
- Write clean and efficient code for XR applications, leveraging platforms such as Unity3D, Unreal Engine, or other relevant tools. Develop interactive features, animations, and simulations.
- Integrate medical data, 3D models, and other assets into XR applications to create realistic and accurate representations of medical concepts, procedures, and scenarios.
- Conduct rigorous testing and debugging of XR applications to ensure they function as intended across different devices and platforms. Address performance issues and optimize applications for a smooth user experience.

Research and Publications

- Identifying credible sources for grant submissions.
- Contribute to the advancement of the field by presenting or submitting research topics at conferences and in reputable journals.
- Collaborate with stakeholders to review supporting documents based on research topics or funding requirements.
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Leadership and Collaboration

- Manage multiple XR development projects simultaneously, from initial concept to final deployment. Coordinate with team members, manage timelines, and ensure project goals are met.

- Create comprehensive documentation for XR applications, including user guides and technical specifications, to facilitate efficient use and troubleshooting.
- Identify and assess the necessary equipment for the XR program, ensuring optimal functionality and resource efficiency. Work with the simulation program manager for budgetary alignment and request.

Mentorship and Training

- Support, guide, and mentor junior XR developers and train them for the creation of user-friendly XR-based simulators.
- Stay updated on the latest trends, technologies, and best practices in the XR field. Explore new hardware, software, and techniques that could enhance medical education and training experience.
- Provide training and technical support to educators, students, and staff members who use XR applications. Address technical inquiries and troubleshoot issues as they arise.
- Adhere to ethical guidelines and ensure patient privacy and confidentiality are maintained when working with medical data and scenarios.

Other

- Perform other duties as assigned.
- Establish and maintain effective working relationships; work cooperatively and collegially with others in a manner consistent with a workplace of dignity and respect; support and engage in equal employment opportunity principles, rules, and regulations.
- Foster a culture of diversity and inclusion within the Carle Illinois College of Medicine.
- Champion positive inter-professional relationship bridging the college's private/public organization and missions.

Qualifications

Required:

- Bachelor's degree in computer science, game development, interactive media, or a related field.
- Experience with 3D modeling and asset creation for XR applications.
- A portfolio showcasing previous XR development projects is highly desirable.

Preferred:

- Master's degree or higher in computer science, game development, interactive media, or related field.
- 5+ years of experience developing VR/AR games and apps.
- Minimum of one AAA or two AA application release or equivalent professional industry experience.
- Experience with real-time networked features (i.e., synchronous multiplayer games)
- Experience with machine learning, computer vision, and supporting a live service with regular content updates.

Knowledge, Skills, Abilities

- Proficiency in XR development platforms, such as Unity3D or Unreal Engine.
- Strong programming skills in languages like C#, C++, Python and/or Java.
- Solid understanding of 3D graphics, physics simulations, and animation principles.
- Familiarity with medical terminology, anatomy, and healthcare practices is a plus.
- Excellent problem-solving skills and attention to detail.
- Effective communication and collaboration skills to work with diverse teams.
- Experience with 3D graphics, shaders, and rendering techniques.
- Familiarity with XR hardware, including VR headsets, AR glasses, and motion controllers.
- Ability to create interactive and dynamic XR experiences, animations, and simulations.
- Knowledge of version control systems (e.g., Git or Git Hub) for collaborative development.
- Familiarity with physics simulations and spatial audio implementation in XR.
- Experience with optimizing XR applications for performance and scalability.
- Ability to troubleshoot technical issues and provide timely solutions.

Appointment Information

This is a 100% full-time Visiting Academic Professional position, appointed on a 12-month service basis. The expected start date is as soon as possible after the closing March 15, 2024. Salary is commensurate with experience. The target salary range is \$90,000 - \$100,000.

Application Procedures & Deadline Information:

For full consideration, please submit a cover letter, resume, and contact information for three professional references at

<https://illinois.csod.com/ux/ats/careersite/1/home/requisition/9602?c=illinois>.

Applications must be received by 6:00 pm (CST) on March 15, 2024.

For more information regarding the position, please contact Dr. Caroline Cao at ccao01@illinois.edu. For information regarding application procedures, please contact 217-333-2137.

The University of Illinois system is an equal opportunity employer, including but not limited to disability and/or veteran status, and complies with all applicable state and federal employment mandates. Please visit [Required Employment Notices and Posters](#) to view our non-discrimination statement and find additional information about required background checks, sexual harassment/misconduct disclosures, COVID-19 vaccination requirement and employment eligibility review through [E-Verify](#).

Applicants with disabilities are encouraged to apply and may request a reasonable accommodation under the Americans with Disabilities Act (2008) to complete the application and/or interview process. Requests may be submitted through the reasonable accommodations [portal](#), or by contacting the Accessibility & Accommodations Division of the Office for Access and Equity at 217-333-0885, or by emailing accessibility@illinois.edu