# EAC's VR Summer Camp at UA Little Rock

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Figure 1: Middle school students participate in a UA Little Rock Virtual Reality Summer Camp at the Emerging Analytics Center on campus. Photo by Benjamin Krain [4]

During the summer of 2023, the *Emerging Analytics Center* (EAC) hosted its third annual Virtual Reality (VR) Summer Camp at the University of Arkansas at Little Rock [1]. This unique camp is designed to impart essential game and virtual reality development skills to students ranging from 7th to 12th grade. Situated on the UA Little Rock campus, the EAC serves as a cutting-edge research lab specializing in VR, augmented reality (AR), and data visualization. Its portfolio contains applications in marketing, education, and medicine. Located in the Engineering and Information Technology building, the EAC offers opportunities for both undergraduate and graduate students to engage in VR and AR projects, such as the VR Summer Camp.

Since its inception in 2021, the VR Summer Camp has been proudly developed and by a dedicated team of UA Little Rock students led by student Danica Mobley [3]. The team crafts detailed lesson plans, guiding camp attendees through a week filled with step-by-step instructions. The camp's primary focus centers on the development of software for the Meta Quest family of VR headsets, including the widely popular Meta Quest 2 headset.

For those without access to a VR headset, the EAC provides options for purchasing or borrowing headsets from the lab. At the camp, attendees discover the versatile capabilities of the Unity game engine, an industry-standard tool used by independent developers and major corporations alike. Many of the students attending the camp may recognize Unity, especially since some of their favorite games like Beat Saber, a popular VR game, were crafted using this engine. Beyond gaming, Unity can be harnessed to create applications extending beyond entertainment. It can serve as a foundation for diverse projects, including training simulations and data visualization. At the EAC, Unity empowers the creation of VR applications tailored for various purposes, from training pest control workers to visualizing medical data and offering virtual campus tours.

Throughout the week, students delve into the intricacies of manipulating 3D objects within virtual environments. They have the unique opportunity to personalize their digital worlds by designing custom textures for objects and incorporating captivating special effects. Moreover, they develop proficiency in traversing these immersive environments, utilizing a combination of both physical walking and controller-based movements. Comprehensive guidance is provided on implementing controller interactions, enabling students to perform actions such as pushing, grabbing, or tossing objects. Furthermore, participants are guided in the art of integrating game mechanics into their creations, which includes setting in-game goals and implementing score tracking.

During the VR Summer Camp, students had the opportunity to broaden their horizons in more ways than one. They were treated to an inspiring talk by the EAC's resident artist Jason Zak, an individual with professional experience in the gaming industry. This discussion provided insights into the creative process and artistic aspects of game and virtual reality development. In addition to the captivating artist talk, students delved into the realm of cutting-edge technology as they explored the capabilities of the Insta360 camera. This innovative device allowed them to capture the world in stunning 360-degree photos, opening doors to a new dimension of visual storytelling. These unique experiences complemented the camp's core curriculum, offering students a holistic perspective on the exciting and diverse world of VR and AR development.

If you're considering the VR Summer Camp in the future, it's an opportunity to learn, create, and be inspired within the dynamic world of VR and AR. Don't miss out on this chance to broaden your horizons, embrace technology, and embark on a journey of creativity and innovation. To keep up with the EAC's latest news and events, you can follow their Facebook page [2].

# References

[1] Emerging analytics center. URL https://eac-ualr.org/.

[2] Eac facebook page. URL https://www.facebook.com/eac.ualr/.

[3] Virtual reality summer camp 2021. URL https://ualr.edu/news/2021/07/08/virtual-reality-summer-camp/.

[4] Benjamin Krain. Middle school students participate in a ua little rock virtual reality summer camp at the emerging analytics center on campus. URL https://ualr.photoshelter.com/search/result/I0000va2zWmRYNgY?terms=eac.