

Comparing Tools For Creating AR Experiences



Augmented Reality (AR) can combine digital content with the physical world, but creating AR prototypes often requires technical knowledge. This thesis compares how Unity and Snap Lens Studio support rapid prototyping of the same AR experience.

Why AR prototyping can be difficult

AR allows digital content to appear as part of the physical world by adding digital objects and interactions. However, building AR prototypes can be complicated as it often requires programming skills, knowledge of 3D environments and interaction design experiences. AR authoring tools aim to reduce these barriers. They can offer visual interfaces, templates and low-code workflows, making it easier to place digital objects, define interactions and test prototypes.

One Concept, Two Tools

The same reminiscence-based AR concept was created in both authoring tools, a virtual memory space with photographs placed in frames and simple interactive elements. In the prototype, the user can view the images placed in frames and interact with selected elements by tapping an image to change the displayed photograph. The development process was evaluated with six participants where all had some form of technical background. During the evaluation, they followed a guided procedure and reflected on the process.

Fast or Flexible? It Depends on the Goal

The conclusion is therefore not that one tool is always better than the other. Instead, the best tool depends on the purpose of the prototype. If the goal is to explore and communicate an early AR idea, Snap Lens Studio is the more suitable choice. If the goal is to build a more flexible and scalable prototype, Unity is more appropriate.

Different Workflows Mean Challenges

The participant evaluation showed that the tools were experienced differently. Unity was seen as powerful, but participants needed time to understand how Unity was structured and how different parts of the prototype worked together. This made Unity feel flexible and adaptable, but also more difficult to learn at the beginning.

Snap Lens Studio was generally perceived as more approachable in the beginning. Participants found it easier to understand how the prototype was organised since the interface gave quick visual feedback and made it clearer how objects were connected. This made the workflow feel faster and more accessible, especially for simpler prototype tasks.

When Interaction Became Difficult

Both tools became more challenging when interaction logic was introduced. Unity offered more flexibility and technical control, but required more setup and technical understanding. Snap Lens Studio supported faster and more visual prototyping, but became more limited when customised interaction was needed.

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