

## Unreal Engine Plugin for 3D Video Game Accessibility

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**Introduction:** To combat the limitations on gaming in the blind/low-vision community, the CEAL lab developed NavStick, a system that helps visually impaired players (VIPs) “look around” in a game environment. It is an audio-based system that repurposes the right joystick into a 2-dimensional line-of-sight navigator. Our objective was to create a consumer-ready version of NavStick that is marketable to large-scale gaming companies. To increase the impact of NavStick, we decided to implement NavStick as plugin using Unreal Engine 5 (UE5). The goal was to create a minimum viable product (MVP) of this plugin. We developed a prototype of the system and onboarded an external developer to add advanced features. As a result, the NavStick plugin will soon be commercialized, making gaming accessibility more attainable.

**Methods:** We decided UE5 was the best software to use to market the NavStick plugin to large-scale gaming companies. Once a prototype was developed, we contacted an expert in UE5 to add advanced features to the system. These steps were necessary to make the plugin as marketable as possible.

**Results:** We developed a working prototype of NavStick in UE5. We also created UI wireframes that assisted in the communication with the external developer.

**Conclusion:** Because of the progress made towards developing the MVP of the NavStick plugin, NavStick is closer to becoming consumer-ready and impacting the VIP community.

### **References:**

1.Nair V. NavStick: Mak VG Blin Acc. 2021

### **Acknowledgements:**

Amazon AI