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| --- | --- | --- | --- | --- | --- | --- | --- |
| Risk event | Likelihood (1-5) | Impact (1-5) | Risk Exposure (1-25) | Mitigative Action | Alternative Action | Occurs?  (Yes/No/TBD) | Actions taken |
| Fitting electronics into a spectacle frame clip-on enclosure is too technically complex and difficult. | 4 | 4 | 16 | Conduct thorough prototyping and testing of the case design early in the project to identify and address integration issues. | Explore alternative enclosure designs or materials that are more manageable in terms of complexity. | Yes | Instead of glass frame design, head mounted design is chosen |
| Processing power and onboard memory of Raspberry Pi Pico might not be enough for the complexity of this project. | 4 | 5 | 20 | Optimize code and data storage to work efficiently within the constraints of the Raspberry Pi Pico boards. | Consider upgrading to more powerful microcontrollers if necessary. | TBD |  |
| Powering three Raspberry Pi Pico devices with their electronics from a single supply may lead to suboptimal or non-functional performance. | 5 | 3 | 15 | Calculate power consumption and explore energy-efficient solutions. Implement features such as power management and hot-swappable batteries to address power challenges. | Use separate power supplies for each Raspberry Pi Pico to ensure stable and independent power sources. | TBD |  |
| Developing VR-specific lifelogging software with features like immersive user interface elements, scene/object detection, and metadata auto-tagging may introduce technical complexities, potentially causing project delays. | 5 | 2 | 10 | Simplifying the software scope, such as omitting scene detection and reducing metadata features, can help mitigate technical complexities and minimize project delays. | Utilize pre-existing VR software or libraries to simplify the software development process while still achieving project goals. | TBD |  |
| Implementing stereo content within a VR game engine may prove technically challenging and time-consuming. | 5 | 5 | 25 | Plan for potential difficulties in stereo implementation and be prepared to use existing applications for viewing SBS content as an alternative. | Explore VR game engine plugins or assets specifically designed for SBS video playback, simplifying the integration and reducing technical complexities. | No | Consulting with GodotXRTools developer results into working stereo video player prototype. |
| NEW: Components breakdown or not working perfectly due to technical error or manufacturing defects | 5 | 5 | 25 | Be careful when testing components using multimeter etc, especially when turned on. | Have enough budget left to buy spare components, or use other available components from university. | Yes |  |