Concussion Recovery (Presented by Concussion Alliance & Synapse)

Develop innovative tools that support concussion recovery through evidence-based* guidelines and the responsible use of technology. Solutions should assist patients, caregivers, or clinicians; they should not replace professional medical advice.

Disclaimer: Submissions are prototypes created for the hackathon and are not intended to substitute professional medical advice, diagnosis, or treatment. The Concussion Alliance's and Synapse's participation as Community Partners for this track does not constitute their endorsement or recommendation of any individual submission.

Judged by Concussion Alliance:

Category	1 (lowest)	2	3	4	5 (highest)
Clinical & Domain Effectiveness How effectively does the tool address a real challenge in concussion recovery while following evidence-based* guidelines?	The tool has no clear connection to concussion recovery.	The project mentions concussion recovery but does not meaningfully address it.	The project addresses a relevant concussion recovery challenge, and it loosely follows evidence-based* guidelines.	The project addresses a relevant concussion recovery challenge, mostly following evidence-based* guidelines.	The project is highly effective in addressing a relevant challenge in concussion recovery, closely following established evidence-based* guidelines.
Safety & Responsible Design Does the project communicate responsibly, avoid misinformation, and safely support (not replace) professional care?	The tool provides medically unsound advice, risks harming the user, or claims to fully replace professional care	Contains obvious safety loopholes and high potential for health misinformation.	Generally safe and usable, but lacks clear logic or transparent information/explanations.	Safe, grounded in realistic health practices, and acknowledges limitations.	Significant, effective safety guardrails, consistent with evidence-based guidelines*, and thoroughly acknowledges limitations and the need for professional care.

***Evidence-based international guidelines (this is not an exhaustive list.)**

- Consensus statement on concussion in sport: the 6th International Conference on Concussion in Sport
- Living Concussion Guidelines
- PedsConcussion Living Guideline for Pediatric Concussion

Judged by Synapse chapters:

Category	1 (lowest)	2	3	4	5 (highest)

Neuroscience Understanding Does the solution demonstrate an accurate understanding of concussion, cognition, rehabilitation, or neuroscience?	Demonstrates significant misconceptions about concussion or neuroscience that undermine the solution.	Shows a superficial understanding and contains several inaccuracies / unsupported assumptions	Demonstrates basic understanding of relevant neuroscience concepts with generally accurate reasoning	Demonstrates strong understanding of neuroscience concepts, only with minor inaccuracies. Mostly incorporates claims into design.	Demonstrates significant scientific understanding and accurately / fully incorporates neuroscience concepts to meaningfully improve the solution.
Research Foundation Is the solution grounded in scientific literature with claims appropriately supported?	The project contradicts scientific literature.	Only partly supported by scientific evidence, mainly relying on unsupported assumptions / claims.	Mainly supported by scientific literature, although evidence is limited or only partly integrated in the project.	Utilizes multiple reliable sources with most claims clearly supported by research.	The project is significantly grounded in reliable scientific literature, with all claims well-supported.

Judged by our technical judges:

Category	1 (lowest)	2	3	4	5 (highest)
Technical complexity Quality of implementation, software architecture, and engineering.	Non-functional prototype or mostly hardcoded functionality	Basic integration with limited functionality and complexity	Solid implementation using appropriate technologies and engineering practices.	Well-designed architecture with sophisticated features, algorithms, or integrations.	Exceptional engineering with scalable architecture, optimization, and advanced technical execution.
User Experience & Accessibility Is the product intuitive, polished, and accessible?	Very poor usability with confusing navigation / major accessibility issues.	Functional but difficult to use or visually unpolished	Easy-to-use with acceptable design and basic accessibility concerns	Well-designed interface, which is intuitive and mostly accessible	Exceptional UX that is polished, highly intuitive, and accessible to diverse users.