

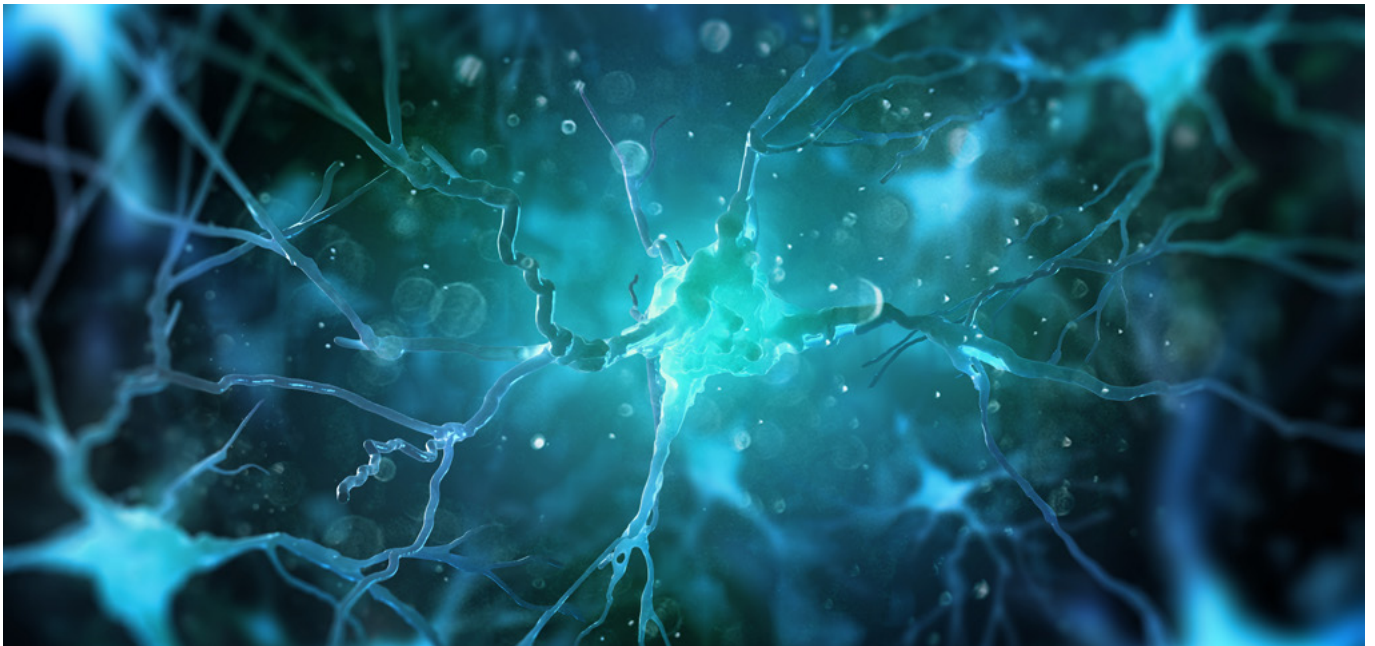


OPPORTUNITY #6

What if we could protect our future selves from past trauma?

YOUR MEMORIES, EDITED

Advances in neuroscience enable the development of approaches to treat and erase past trauma enabling better life outcomes for trauma sufferers and their families.



MEGATREND

Advanced Health and Nutrition

TRENDS

Mental Health
Neuroscience

SECTORS AFFECTED

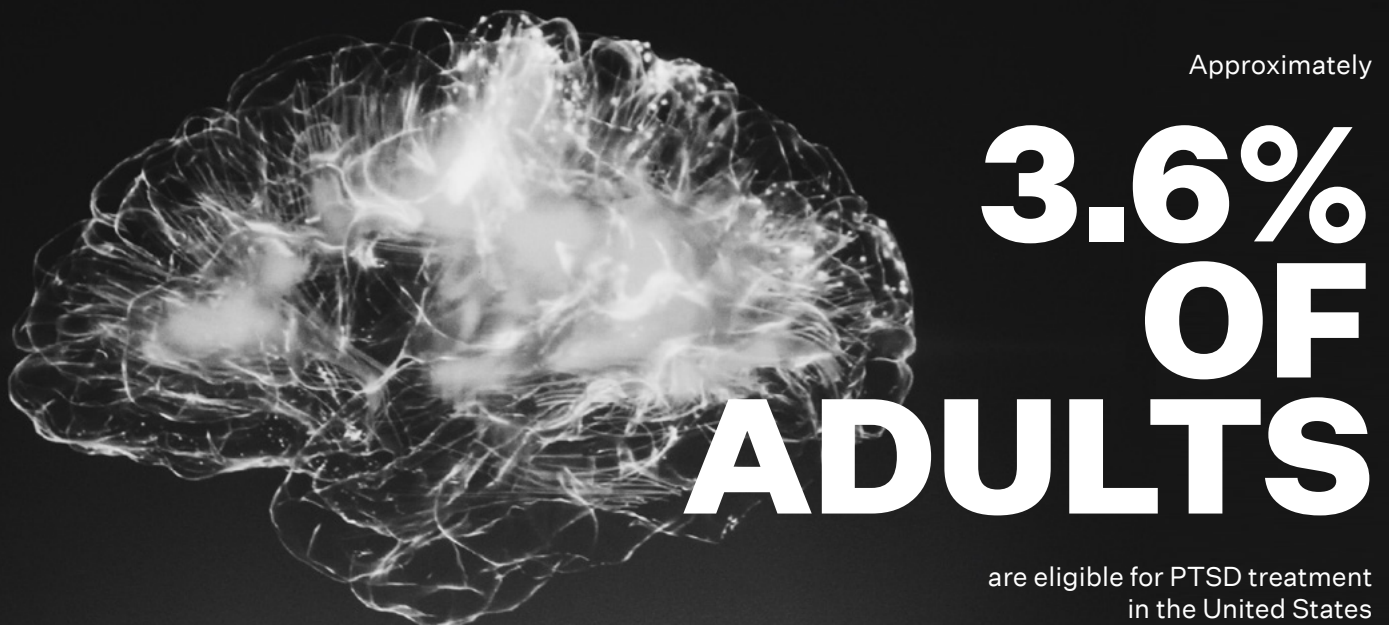
Data Science, AI & Machine Learning
Health & Healthcare
Immersive Technologies

WHY IT MATTERS TODAY

Traumatic events or experiences in childhood can have a long-lasting impact on individuals, resulting in learning, depression and even personality disorders.²³⁰ Trauma shows up when people have difficulties regulating their emotions, difficulty concentrating and diminished creativity, leading to poor mental and physical well-being and poor educational and career outcomes.²³¹ This can also slow a country's economic and social development.²³²

Child maltreatment is often hidden and unreported. In the United States, at least one in seven children experienced abuse or neglect in 2021; in the previous year, 2020, 1,750 children died of abuse and neglect.²³³ Globally, three in four children aged between two and four regularly suffer physical punishment and/or psychological violence at the hands of parents and caregivers. And one in five women and one in thirteen men report having been sexually abused by the age of 17.²³⁴

While research is not conclusive as to whether the impact of trauma can be passed down over the generations,²³⁵ approximately 3.6% of adults (9 million people) are eligible for PTSD treatment in the United States.²³⁶ Virtual reality exposure therapy (VRET) is being considered as a behavioural treatment for PTSD patients: the therapy aims to reduce a person's fear and anxiety to improve their quality of life by eliminating avoidance behaviour.²³⁷





THE OPPORTUNITY

We may not always be aware of repressed childhood trauma as our brain may have purposely covered it up²³⁸ or it may have happened too early in our lives for us to recall. However, advances in both genetics and functional brain imagery are bringing greater understanding of how trauma affects brain chemistry, hormones and brain-activity responses to stress, such as changes in cortisol levels.²³⁹ These offer a range of therapeutic approaches, such as neurostimulation to trigger memories or to desensitise the brain's reaction to them. More advanced approaches can selectively remove negative recollections and erase trauma-inducing memories, leading to more effective treatments started early on during childhood and adolescence.²⁴⁰

At the therapeutic level, better, faster interventions are becoming standard for survivors of trauma-inducing situations, making it possible to prevent the emergence of conditions such as post-traumatic stress disorder (PTSD). The results are improved quality of life, irrespective of whether the person was aware of the past trauma, and better life outcomes for trauma sufferers and their families.

BENEFITS

Improved quality of life, career and educational outcomes. Reduced impact of trauma on the wider family and community. Elimination of the impacts of trauma that may or may not be known. Ability to budget funds to other pressing public health problems.

RISKS

Unintended consequences of intervening in the brain functions involved with memory and recall. Potentially poor long-term effectiveness of treatment.

