

● ABOUT THE CLIENT

Cleveland Clinic is an American non-profit academic medical center based in Cleveland, Ohio. Owned and operated by Cleveland Clinic Foundation, this firm is a leader in research, education and health information offering effective clinical and hospital care. Founded by four renowned physicians in 1921, they had the vision to provide outstanding patient care, investigate their problems and educate those who serve.

Healthy Brains is an initiative by Cleveland Clinic that aims to find out how healthy a person's brain is. The main motive behind the development of the website and app of Healthy Brains is to enable users to improve memory, lower their risk for brain disease and participate in discovering new therapies for brain diseases like Alzheimer, Parkinson or multiple sclerosis. This platform works mainly on improving the health of the brain through a brain check-up test that tells users their personal Brain Health Index (BHI) score.

GOALS

People live in the digital era today, where they are often dominated by gadgets & technologies. Being present in a world of distraction is becoming harmful to the long-term mental health and these distractions have eroded the ability of the users to concentrate. Our client came to us with the requirement of a 'brain-training' program for both website and iOS app that would help in promoting mental health. This enables users to enhance cognitive abilities by answering a set of questions for each parameter listed below-

- Medical Health
- Mental Health
- Physical Health
- Sleep and Relaxation
- Social Interaction
- Food and Nutrition

We have built a reliable platform offering an easy and fun way to take a brain assessment, get detailed results with BHI score, track progress, and provide care plans/tips on how users' lifestyle can impact their brain health. Additionally, we have developed a bi-lingual support system including languages like English & Spanish.



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CHALLENGES

When the client approached us with the Healthy Brains initiative, we found the idea to be very interesting as the platform claim to exercise users' brains. However, as we proceed towards the development phase, we faced some of the challenges while developing the project:

✓ Dashboard

Creating a dashboard for each user that depends on different parameters associated with brain health and finding the accurate BHI results was difficult. Since every person is unique from one another, their 6 pillars of brain health such as physical activities, nutrition, medical history, sleep cycles, mental & social health will also be different, making it more complex.

✓ UI Design

Developing an interactive and engaging user interface that can display BHI results through online assessment tests based on multiple brain health factors was a challenging task. However, using desired technology, we were able to provide access to the graphical representation of all the issues within a single click along with the tips, as required.



✓ Complex Calculations

To carry out the calculations for the BHI results without error was one of the main challenges. Using several advanced algorithms, the platform was able to minimize user efforts with an easy-to-answer set of questions that helped in delivering relevant results through intuitive dashboard & maintaining an overall consistency between the app and the website.

● SOLUTIONS

Our team went through a series of interactive discussions with the client and some solutions were implemented that made the project an ultimate success.

✔ Performance Tracking

The brain health performance can be measured, tracked & improved through a customized progress dashboard present in the platform that is based on user's neurocognitive tests.

This gives a detailed view of how the brain of the user is doing along multiple axes and the tips/advice are also given for the parameters that need improvement.

✔ Unlimited Access

One can easily use this brain monitoring system whenever and wherever to check the brain score as per their convenience and time just by answering some questions based on their everyday routines. This ensures that every individual has control over the modifiable components of your lifestyle to improve memory, lower risk for brain disease & stay updated on new trends in brain health.

✔ 100+ Questions

With more than 20 sets of questions for each pillar of brain health, this platform has been built with 100+ questions for each user to control their lifestyle choices and take actions to improve brain health. The entire check-up takes about 20 minutes to complete but users can take time to complete the test anytime they want as the platform allows them to continue from the previous session & answer the remaining questions.

✔ Bi-lingual Support

Developing a platform with more than one language functionality is the best way to make the interface accessible for a broader audience & reach new markets. Users that speak English as well as Spanish can easily use the platform to check their brain health & do the needful actions to improve their brains.

● TECHNOLOGIES USED

The tools & technologies that were used by the team of Clavax for the development of this brain-training program are as follows:

- APIs: Java Spring
- Scripting Languages: PHP, HTML5, DHTML, JQuery, JavaScript
- Framework: Slim
- Platform Environment: Linux
- Database: PostGres
- Web Server Support: Apache Latest Version
- Project Management: JIRA
- Version Control: Bitbucket/Gitlab
- SMS Authentication: Twilio

● RESULTS

The project turned out to be a remarkable success for the users looking for effective ways to promote the brain-healthy lifestyle. With the record of more than thousands of active users worldwide, Healthy Brains has the potential to put your critical thinking, memory and problem-solving skills to the test. The motive of the project i.e. to train users' brains with improved cognitive abilities has been served successfully through a wide range of exercises. The personalized dashboard in the Healthy Brains program has made it easy and convenient for users to track their progress and help in making lifestyle choices thereby reducing the chance for brain disorders. We are glad to be a part of this brain-training program and the overwhelmingly positive response received from the users.