Software as a Service Tool for Assessing Volume Changes In the Brain Aiding the Diagnosis of Alzheimer's Disease

CEOCFO: *Dr. Ahdidan, what is the idea behind Brainreader?*
Dr. Ahdidan: The idea behind this company is to provide an objective assessment of brain volume changes based on our FDA-cleared normative dataset. The Neuroreader report provides actionable information to the doctor, psychiatrist or neurologist who is trying to assess the health of the patient.

CEOCFO: *What does brain volume signify and what causes a change in the volume?*
Dr. Ahdidan: Many things can make the brain volume change. For example, stress or diseases such as Alzheimer's disease, where neurons will disappear or shrink in size and the brain will show in its volume that you do not have as many connections as you had before. You will see that you have bigger ventricles, which are the holes where the water that is in the brain gathers, so those holes will be bigger. For example, the hippocampus, which is the center of memory, if memory deteriorates, then the hippocampus will also shrink. Research as shown evidence that those changes can be reversible or irreversible depending on when you catch them. Our goal is to try to catch them as early as possible, before they become irreversible.

CEOCFO: *Hence, you are looking at all of the different components of brain volume.*
Dr. Ahdidan: Yes, that is correct.

Dr. Jamila Ahdidan
Partner, CTO

CEOCFO: *Would you tell us about the Neuroreader™, what it does and how it is different from other methods of reading brain volume?*
Dr. Ahdidan: What our software Neuroreader™ does is that it takes as inputs an MRI of the brain and analyzes it. It delineates the different structures of the brain, measures their volume, then compares each of those volumes to a normative database based on a statistical model that we have developed. The whole process is FDA-cleared and is based on the latest research both for its development and its performance tests.

CEOCFO: *Are you able to do this quickly?*
Dr. Ahdidan: This is done between 7 and 4 minutes. Our work is based on the graphical card, the GPU, and all of the calculations are done in parallel, which makes it very fast.

CEOCFO: *Where are you in the development and commercialization process?*
Dr. Ahdidan: We are done with the development and today we have a product that is being used to assess the brain and produce a Neuroreader report several American sites. We are of course all of the time trying to invent new features, so in a sense our development is still going on, but they would be for future releases. However, for the core use of the software, the development is completed and we have done our release a few weeks ago. We have started the commercialization of the software last year. Since we have the FDA certification people are able to legally use our software clinically and get reimbursed for it.

CEOCFO: *How is what you providing different from what is currently in use today?*
Dr. Ahdidan: Today, the radiologists and the neuroradiologists look at brain MRIs and describe it to the referral. They usually describe if there is a major issue like a stroke or tumor or if there is an overall decrease in volume of the brain. However, most radiologists are not able to depict subtle brain volume changes. What we do is we bring more details into

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this general atrophy description. We provide a standardized and FDA-cleared quantitative assessment of the volume of most brain structures.

CEOCFO: *What have doctors been doing in the past to measure the brain volume?*
Dr. Ahdidan: In the past some doctors have had in-house tracers. Some people were trained to actually manually measure the different volumes. They were painting the brain using a computer program and doing it manually. Other doctors were just using an eyeballing method, so they were just looking at the pictures and not actually measuring the sizes. They were not really measuring. Therefore, this is something new that we give to this area. If it was done, only a few hospitals had an in-house tracer, which it would take days and require a great deal of training to be able to draw those different structures and measure the volume. There was no normative datasets that you could compare the numbers to, so the volume would be measured and used as is.

CEOCFO: *What you are offering is quite a game changer?*
Dr. Ahdidan: Yes it is.

CEOCFO: *How will you be getting attention from the medical community?*
Dr. Ahdidan: One of the best ways to get attention from the medical community is to write scientific articles, where we would let different scientific groups use our software to analyze their data and then let them report their results in a scientific publication. Many times they will report that they achieved results that they never had before using our software. The second way to get the attention of the medical community is to be present at conferences, such as conferences for Alzheimer's disease, radiology and neuro-radiology. It helps to just be present at these conferences or to have a booth, talking to that community in some way, making appointments and presentations. It is also important to have a presence on social media and to put out press releases to reach the community.

> **"We provide a standardized and FDA-cleared quantitative assessment of the volume of most brain structures." - Dr. Jamila Ahdidan**

CEOCFO: *What has been the response so far?*
Dr. Ahdidan: The response has been quite positive. Of course, every hospital, even if they can see that you have articles being published, press releases and other people using your software, they still want to try the software in-house with their own data. Therefore, it takes time, even though they might be aware of what you have. Otherwise, the response has been quite positive. We have made our own marketing research on our software and we found out that people have been looking for software to do what we are offering. The community knew that they had to move forward in terms of technology and it was just waiting for a good, reliable and FDA cleared software to be created for them to use.

CEOCFO: *Are you funded for the steps that you would like to take? Will you be seeking partnerships and distributors?*
Dr. Ahdidan: We are funded for now, but we are seeking partnerships for all levels, for distribution and collaboration. We would also like to have an OEM partnership, such as a producer of scanners or a big firm that produces medical software. The partnerships are important in the medical field, but also corporate as well.

CEOCFO: *What is the business model? What will people be purchasing and how will they purchase your software?*
Dr. Ahdidan: We use a Software as a Services (SaaS) model in selling our product. We have our software hosted on a server in a HIPAA compliant data center, so people would be using our software in the "cloud". We are constantly updating our software, so you will always have the most updated version of our software. People would connect through a secure connection to access our software and they would pay for the use of the software, as a pay-per-click model. They can also commit to a certain number of clicks every year or period of time. We would then provide for the user support after implementation. In that sense, they would use the software as they need it and they would always get the best version of the software at all times.

CEOCFO: *What surprised you most as you have developed your software and are beginning commercialization?*
Dr. Ahdidan: I did not expect the FDA to be so difficult. That was a surprise. I have given birth to two children and I have a Ph.D., but neither of those could compare to the process of getting the FDA-clearance. It also surprised me to see that even though doctors are willing and want to have the software, as they find it very good, it is still hard work to make the hospital want to buy it. The doctors know that our software would allow them to provide better results for the patients, but

it is still a struggle to get them to ask for the money to pay for it. One more thing that really surprised me is that we have used a great deal of time on the FDA clearance of our software and we have heard people say that it is not that important for them to have the full FDA clearance.

CEOCFO: *Put it all together for our readers. Why pay attention to Brainreader and your Neuroreader today?*
Dr. Ahdidan: We have an innovative software that is going to go very far. We have come up with a new way of assessing brain volume changes. The medical community is focused on curing disease, but we have come up with a prevention tool, which is a digitalization of one part of the medical service that is provided. Therefore, we are at the beginning of a revolution in the American medical system.

Interview conducted by: Lynn Fosse, Senior Editor, CEOCFO Magazine

Brainreader ApS

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