Group 9: Layman Summary

Epilepsy affects 1.3-2.8 million people worldwide. Epilepsy is a brain disorder that causes seizures when the brain’s electrical activity becomes abnormal. Researchers have developed a new computer program that can improve the treatment of epilepsy by finding the regions in the brain that cause epilepsy. A seizure is a symptom of epilepsy and it can start at a different region in the brain from where epilepsy is presented.

It is difficult for surgeons to find and remove the area that causes epilepsy and therefore difficult to stop the patient from seizing. Doctors are able to identify the regions where seizures start; the computer program will complement this information to find the epileptic source. This is done by recording brain activity directly on the surface of the brain and the computer program uses this to find the region that causes epilepsy. The researchers tried this method on seven patients, who were going to undergo surgery to remove the part of the brain that the doctors thought was causing their epilepsy. They compared the areas that doctors identified through medical examinations with those the computer found.

After surgery, if the areas found by the computer and the doctor matched and were removed, it resulted in more improvement in the patient’s epilepsy than if they did not match, where the doctor only removed the area that he/she found.

Therefore, this study presented an example of how technology can be used to assist doctors to treat patients better.