Our research focuses on understanding the response of the human brain to head impacts, using computational head models. We have developed the brain simulation research platform that can run finite element models of the brain and predict its response to a specific impact. In an effort to get a more accurate response, we have now added axonal fiber tractography to our computational model which enables us to study axonal strain and strain rates. This poster will focus on the fiber tractography and the method with which we have incorporated them into our brain model and code.