



TEXAS TECH UNIVERSITY
DEPARTMENT OF COMPUTER SCIENCE
WHITACRE COLLEGE OF ENGINEERING



U-REASON SEMINAR SERIES FALL - 2013

Electroencephalography(EEG) Test Interpretation using Answer Set Programming

By **Bailey Everts**
Texas Tech University

Date: October 29th, 2013 (Tuesday)

Time: 3:40pm-4:40pm

Venue:ECE 226 (Bullen Room)

Faculty Coordinator: Dr. Yong Chen (yong.chen@ttu.edu)

Student Coordinators: Navaneeth Thiagarajan, Dan Ferguson, Lakhan Jhawar

Abstract:

In order to create an Answer Set Program (ASP) which would interpret Electroencephalography (EEG) Tests, we needed to extract information from a BASIC program written by K.J. Oommen, M.D. and formulate it into declarative knowledge. The important pieces of information we needed to know are how to identify when there is an abnormality and what the abnormality means to a patient. Primarily this information is extracted from brainwave frequencies given from the left and right sides of anterior, central, and posterior sections of the brain. I will be focusing on the methods used to extract and transform this 30+ page BASIC program into an ASP program consisting of only about 100 lines.

Speaker Bio:

Bailey Everts is an undergraduate Computer Science student graduating December 2013. He has been doing research under Dr. Yuanlin Zhang with the primary goal being to formulate knowledge about EEG Tests. His primary interests lie in the field of Artificial intelligence. After graduating he is intend to pursue a career in Software Development.

