**CSC 337 Final Project Proposal**

Our group’s members are **Anthony Schlecht** and **Andrew Enriquez**. We will be designing a web application that will allow a user located in Tucson to select a location from a dropdown list of states throughout the United States that they want to communicate with. Once the state is selected and the search button is pressed, the app will return a Signal to Noise Ratio (SNR) number and let the user know whether the atmospheric conditions are suitable for communications using a 5-watt transceiver on the 20-meter amateur radio band. A message will be displayed on the page to indicate if the conditions are suitable for communications based off the SNR. There will be a button to clear out the previous search. The app will also allow the user to hover their mouse over the SNR value and display an image showing the two different locations on a map and the propagation path of the signal.

The SNR number for each state in the drop-down menu will be stored in a database and updated every 10 minutes. This value is associated with the ionospheric conditions in the upper atmosphere. Since this region is always changing, we will use JavaScript to create a random SNR value for each location from Tucson and POST it to the database. When the parameters are selected on the HTML page, the JavaScript will use these to GET the parameters from the database.