

Web Interface for Power System Fault Visualization and Analysis

Project Objective

Develop a web-based user interface to visualize power system fault locations which enables the users to interactively view the fault, its environmental properties and related statistics.

Task Descriptions

- Use existing online map applications (e.g. Google Map) or open source GIS systems (e.g. GRASS) as the base map.
- Objects to be displayed, such as power lines, power faults, weather stations, etc., are available in database.
- Fault statistics and numerical properties (e.g. fault density map, interpolated temperature, wind field) are generated offline and available in database.
- The interface should include basic map viewing capabilities, such as zoom in/out, panning in all directions, turn on/off layers, etc.
- The interfaces should be able to show users the fault properties and statistics (e.g. time, duration, weather conditions) in a proper way.

Requirements

- 1 junior or senior with GPA >3.5
- Experiences in developing interactive webpages
- Basic knowledge of GIS and online map applications
- Plus: experience with any online GIS application or spatial statistics

If interested, please send your resume or questions to ycai2@ncsu.edu before Sep. 7th. The selected person will work 10 hour/week through the fall semester and will be compensated through NSF Research Experience for Undergraduate (REU) program.