ELEN4012 (HV Group B)

Week 6 Progress 19/08-24/08

25 August 2019 / 10:30 PM / HV Lab

ATTENDEES

Group 05: Jason Smit (Chair), Tyson Cross(Minutes)

Group 09: Graeme Young, Marco Zahra

Group 44: Ndivhuwo Maswoba

Dr. Hugh Hunt, additional staff and supervisors to be noted

AGENDA

Completed from Last Week:

1. **Group 09:**
    a. Comb generator
    b. third party device testing
    c. determined Antenna factor for LPDA
    d. obtained CISPR limits
    e. found attenuation in cables
    f. proper pre compliance tests
    g. Refined software

2. **Group 44:**

    a. Relay picking up phase to phase and ground to phase faults for some phases
    b. R-X diagram plot to visualise the impedance at different length when fault is applied
    c. Analysis of high ground fault resistance on the rscad Mho distance relay
    d. Analysis of High fault ground resistance on the SEL-321 relay
    e. Started analysing for infeed effect and Mutual coupling

3. **Group 05:**
    a. Created additional image masks (Nuke)
    b. Trained/tested most networks
    c. Created a filter that averages the pixels that are below a threshold to reduce noise in dark regions
    d. Tested the augmented data and added it to the dataset
    e. Removed problematic data from the training dataset (UP)
    f. Integrated the directionality and event information tools into the application (Simple testing performed)
    g. Modified the segment script to allow calls from the training script
    h. Added event details to segment app

Challenges

4. **Group 09:**
    a. Comb generator
    b. Antenna factor

5. **Group 44:**
    a. Analysing for infeed does not impact on the line impedance
    b. The Sel-321 not picking faults.

6. **Group 05:**
    a. Performance issues
    b. No LSTM
    c. False detection -> Effects the event segmentation
    d. Using a pixel count based threshold to compensate, is this good enough?
    e. Low/high variance in data

Weeks agenda

7. **Group 09:**
    a. Finalise all necessary things for open day
    b. Finish up project

8. **Group 44:**
    a. Analysing infeed effect on SEL-321 distance protection
    b. Analysing and simulation of series compensation on Sel-321 distance protection

c. Working on the Poster for open day
d. Comparing Analysis results to those of standard Mho relay on Rscad

9. **Group 05:**
    a. Finish the poster and presentation video
    b. Print the poster
    c. Setup for open day
    d. Metric evaluation
    e. Write reports

NOTES: