AN A.I. SOLUTION BY AN ITDI PERSONNEL WITH HIS TEAM BAGGED THE BEST USE OF DATA SCIENCE IN THE RECENTLY HELD DATAQUEST 2022: GENDER-RESPONSIVE LABOR MIGRATION HACKATHON

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Congratulations to Mr. Christian D. Laurio, RCh, of the National Metrology Division, a member of the TEAM DARNA ((**D**etection of Anomaly in OFW Recruitment Posts thru **AR**tificial **N**eur**A**l Network) which won the Best Use of Data Science out of 15 submitted projects by the Qualified Teams in the recently concluded Dataquest 2022: Gender-Responsive Labor Migration Hackathon.

DARNA studies Facebook OFW recruitment posts and tags them as low risk or high risk. For it to work, the FB post is copied and pasted to the DARNA website. DARNA shows whether it is low risk or high risk. If high risk, DARNA shows possible reasons why it possibly came from an illegal recruiter. It shall also show the Department of Migrant Workers (DMW) website to link the user to legitimate job postings.

In the model development, the dataset was obtained from the combined job postings from FB groups and the DMW website. DMW website entries are automatically tagged as low risk. If the data came from FB, it was further validated on the DMW website whether the posting agency is legitimate, then it is tagged as low risk. Otherwise, all posts are tagged as high risk. A combined NLP and Neural Network was used to develop the model. Around 360 data was used to train the model, with 50% of each tagged as low risk and high risk. The model shows 88% accuracy

For future developments of the model, DARNA shall extract insights on what are the usual targets of illegal recruitment, such as gender, age group, and job requirement. High-risk job posts can be submitted to DMW or concerned agencies for easier investigation. Lastly, DARNA shall be deployed as a website application or through a chatbot and be integrated into Facebook, which can be accessed even through free data.

Mr. Laurio is currently training under the SPARTA Data Scientist Pathway which is funded by DOST- PCIEERD.

Your DOST-ITDI Family is very proud of your achievement. Keep up the good work atom!

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