Development of Low-Resourced Language Respiratory Symptoms Dataset from Social Media Posts Towards Public Health Surveillance

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Social media has been a popular platform for mass social interaction. However, the proliferation of misinformation, coupled with increased public surveillance utilizing social media posts, has led to the emergence of infodemics. Despite lacking medical validation, social media posts present an opportunity for early detection of potential health threats, providing valuable insights for government health units to prepare mitigation plans before official reports from hospitals emerge. This dataset comprises of 14,000 multi-platform social media posts focusing on leveraging low resourced languages - Filipino and Cebuano from platforms such as Reddit, Facebook, TikTok, and Twitter to identify emerging trends of respiratory illness symptoms. This paper developed a dataset annotated by medical experts to discern posts that may indicate symptoms related to COVID-19, Pneumonia, Tuberculosis, or Acute Upper Respiratory infection (AURI). The dataset is sought to be used as a testbed for language research applied to Artificial Intelligence applications in public health surveillance. By analyzing trends in social media content, government health units can gain early insights into potential disease outbreaks, allowing for prompt implementation of preventive measures and allocation of resources.

Development and Validation Test of 3D-print based cerebrum mannequin for Anatomical learning devices

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Breast cancer is close second to lung cancer as the most diagnosed type and the leading cause of cancer deaths due to lack of typical symptoms and signs while early-stage breast cancer is often neglected. With this, improvements in computer-assisted diagnosing and care for breast cancer have increased through advancements in computer vision. In the field of computer vision, the use of convolutional networks in deep learning has shown promising performance in recent works for image classification and pattern recognition therefore the study opted to use this approach. This study will interpret a mammogram by using a generative model for reduction following the use of multiple discriminative models for classification. First, a generative model in the framework of a variational autoencoder (VAE) will be created followed by the evaluation of several discriminative models to interpret the stage of breast cancer. While the framework of this study can be used to make supplementary opinion for interpreting breast cancer for early detection, especially in areas where there is poor access to radiologists and medical experts. However, the result is not intended to replace medical diagnosis but rather serve as accompanying material in improving the quality of service and diagnosis of breast cancer

DIAGNOSING MAMMOGRAMS WITH REPRESENTATION LEARNING USING STACKED MODULES

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