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| Title | Assessment of Building Damage on Post-Hurricane Satellite Imagery using improved CNN | | |
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| Abstract |  |
| Damage assessment is one reasonable method for adopting good procedures for obtaining speedy and dependable attention during natural calamities such as a hurricane. Lately, calamity researchers have often used satellite imagery to predict the number of damaged properties. It can detect the damaged structures in time by integrating satellite imagery and Convolutional Neural Network (CNN) transfer learning. Consequently, choosing the variables of transfer learning success in this scenario is demanded. To identify damaged structures post-hurricane, we introduce a technique based on VGG16 that utilizes satellite imagery features of the hurricane-affected region. The global average pooling, which is a layer substitutes the fully connected layer to minimize parameters and enhance convergence speed. The experimental outcome indicates which proposed model's overall accuracy for post-hurricane image classification can reach 0.98 per cent. Our proposed method approximates the classical CNN, VGG16, VGG19, AlexNet and surpasses their performance. | |