Bengali Hand Sign Gestures Recognition using Convolutional Neural Network

**Summary:**

The paper proposes a model for recognizing Bangla sign language gestures using convolutional neural networks (CNN). Sign language serves as a natural language for communication among people who are deaf or have speech impairments. The proposed model uses a large publicly available sign language dataset to detect Bangla Sign Language (BSL) gestures. CNN is used to recognize and classify hand images in the screen and then categorize the hand skeletal features extracted from the image into a standard communicative meaning for all. The proposed method achieves 98.75% accuracy. The paper also discusses related research in the area of sign language recognition using machine learning and deep learning techniques.

**Advantages:**

1. The proposed method achieves a high accuracy rate of 98.75%, indicating the effectiveness of using CNN for Bangla sign language recognition.
2. The paper addresses an important issue of developing automatic sign language conversion systems to bridge the communication gap between the hearing-impaired and the rest of society.
3. The paper provides valuable insights into the development of sign language recognition systems and the use of machine learning algorithms for this purpose.

**Disadvantages:**

1. The paper only focuses on Bangla sign language, which limits its applicability to other sign languages used around the world.
2. The paper does not discuss the potential challenges of implementing automatic sign language conversion systems in real-world settings.
3. The paper does not provide details on the dataset used for training and testing the proposed method, which may affect the reproducibility of the results.

https://sci-hub.se/https://doi.org/10.1109/TENSYMP50017.2020.9230658