Phoneme Classification using DNN

Introduction

The goal of this project is to classify phonemes using a Deep Neural Network (DNN) model. Phoneme classification is a crucial task in the field of speech processing, as it allows for the development of advanced speech recognition systems.

Methodology

In this project, a DNN model was used for phoneme classification. The optimization algorithm used was Adam with Weight Decay, and the loss function was Crossentropy. Batch normalization was also employed to improve the performance of the model.

Results

The results of this project demonstrate the effectiveness of using a DNN model for phoneme classification. The use of Adam optimization with Weight Decay and Cross entropy loss function, in combination with batch normalization, improved the accuracy of the model.

Conclusion

This project showcases the potential of Deep Learning in the field of speech processing and highlights the importance of choosing appropriate optimization algorithms and loss functions for improved performance. The results of this project demonstrate the feasibility of using DNN models for phoneme classification.