Real electrical signals to text

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Abstract

In this paper, for the first time we successfully achieved two major accomplishments (1.) predicting any real clean analog signal to english language (2.) converting real clean electrical signal of a nanomanufacture fluidic electronics multi-100,000 nodes nanoscale pores chip [1] to unicode language.

I. Introduction

The advent of technology over the last decade has led for the first time to nanomanufacture nanoscale pores in synthetic single digit nanometer thickness membrane for fluidic electronics multi-100,000 nodes nanoscale pores chip [1-2], nanomanufacture DNA sequencing single nanoscale pore in synthetic single digit nanometer thickness membrane to detect and sequence each base of DNA [3].

Deep Learning was initially introduced as an automatic feature extraction system, requiring minimum pre-processing effort by the user [4-6]. The most popular deep learning models are Convolutional neural network (CNN), which uses images to identify similarities and patterns. Advancements in CNN architecture led to the development of sophisticated algorithms such as Recurrent Neural Network (RNN) and Reinforcement Learning algorithms [6].

II. Results and Discussion

(A) Experiments

Table 1. shows truth and predicted analog audio speech signals and corresponding english language using reinforcement learning deep learning algorithm method [4] in matlab commercial software. We trained 15 analog audio speech signals and it's corresponding english language to predict a user given 16th new analog signal to it's corresponding english language.

Analog data (truth)	**Word (truth)**	**Analog data (predicted)**	**Word (Predicted)**
[0.006164550781250, 0.075042724609375, 0.031188964843750, 0.006134033203125, 0.038085937500000, 0.018829345703125, -0.025024414062500, -0.031188964843750, -0.075042724609375, -0.125854492187500, -	Hallelujah	[0.0195075291873, 0.09635713523597, 0.083648471995233, 0.007286403789, 0, 0.018395017403, -0.235778201754, -0.08751373253, -0.015412925712, -0.0513651812935, -0.474627289, 0, -	Hi lake yeah

0.144317626953125, 0.181243896484375, -0.190490722656250, -0.075042724609375, -0.012725830078125, -0.038116455078125, -0.075042724609375, 0]		0.286919381, 0.14894744, -0.18475710, -0.0264641915, 0]	
[0.0078, 0.0078, 0.0156 ,0.0156 ,0.0078, 0.0078]	How	[0.0078, 0.0078, 0.0156 ,0.0156 ,0.0078, 0.0078]	How
[0.0078, 0.0078, 0.0078, 0.0078, 0.0078, 0.0078]	(sigh while speaking)	[0.03750, -0.1357, -0.185759, -0.817581, 0.8175912]	No words with low sound
[-.0229, -.0411, -0.0609, -0.0792, -0.0928, -0.0992, -0.0974, -0.0889, -0.0739, -0.00529, -0.0257, -0.0039,]	audio tune (no words)	[-.0202, -.0200, -0.0201, -0.0201, -0.0201, -0.0201, -0.0201, -0.0200, -0.0201, -0.0202, -0.0202, -0.0200,]	Faint noise

Table 1. Comparison of truth and predicted analog audio speech signals and corresponding english language using reinforcement learning deep learning algorithm method [4] in matlab commercial software

(B) Real clean electrical signal recording from nanomanufacturing fluidic electronics multi-100,000 nodes nanoscale pores chip

Fig. 1. shows an Analog real clean electrical signal recording of a nanomanufacture fluidic electronics multi-100,000 nodes nanoscale pores chip [1]. native2unicode(bytes) function command in matlab commercial software converts a numeric vector, bytes as in Fig. 1 analog signal numeric vector, to a Unicode® character representation [4].

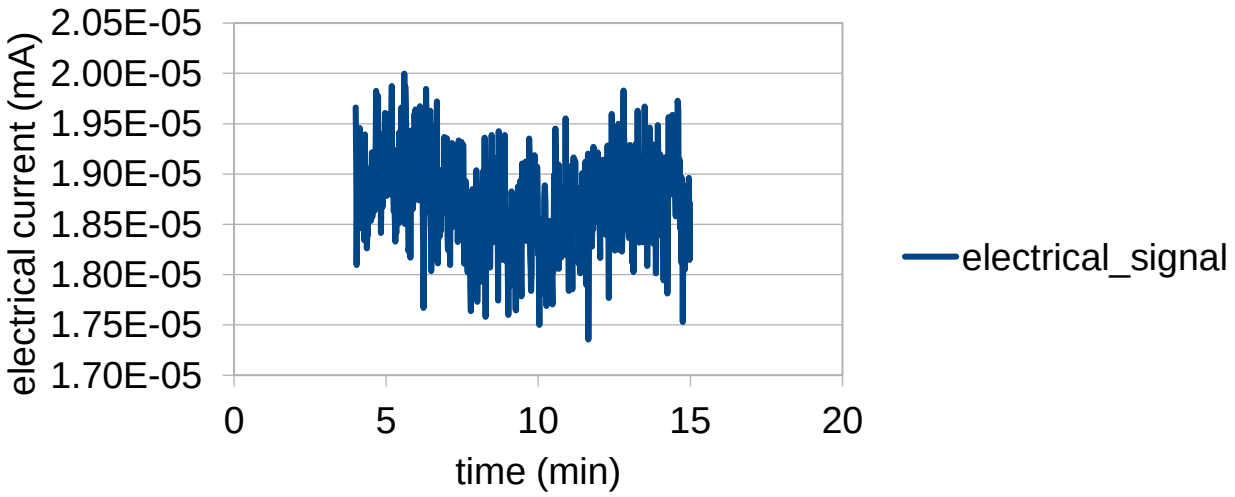

Figure 1. Analog real clean electrical signal in nanomanufacturing fluidic electronics multi-100,000 nodes nanoscale pores chip [1]

Conclusions

Here, we succeeded in achieving two accomplishments (1.) predicting any real clean analog signal to english language (2.) converting a real clean electrical signal of a nanomanufacture fluidic electronics multi-100,000 nodes nanoscale pores chip [1] to unicode language.

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