

---

# Fully Convolutional Networks for Semantic Segmentation

---

Nan Wei  
UC San Diego  
nwei@ucsd.edu

Renjie Shao  
UC San Diego  
reshao@ucsd.edu

Hongyi Ling  
UC San Diego  
holing@ucsd.edu

## Abstract

## 1 Introduction

## 2 Method

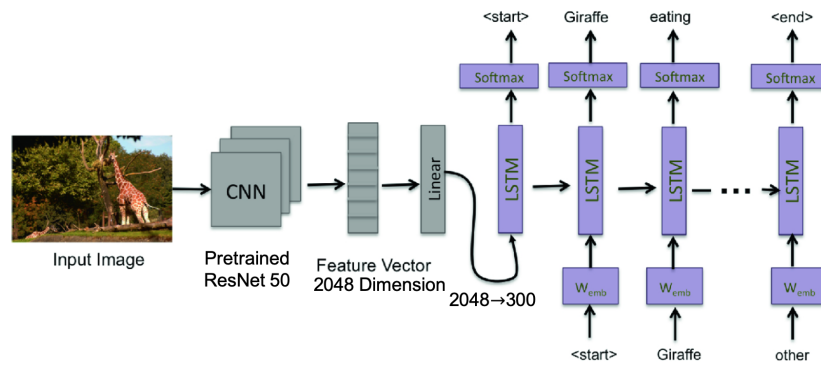


Figure 1: Model Framework [?]

## 3 Experiments

Table 1: Cross entropy loss and perplexity score on the test set

model	cross entropy loss	perplexity score
LSTM with pretrained word embedding	2.30	

Table 2: BLEU-1 and BLEU-4 scores

model	BLEU-1	BLEU-4
LSTM with pretrained word embedding	87.31	19.02

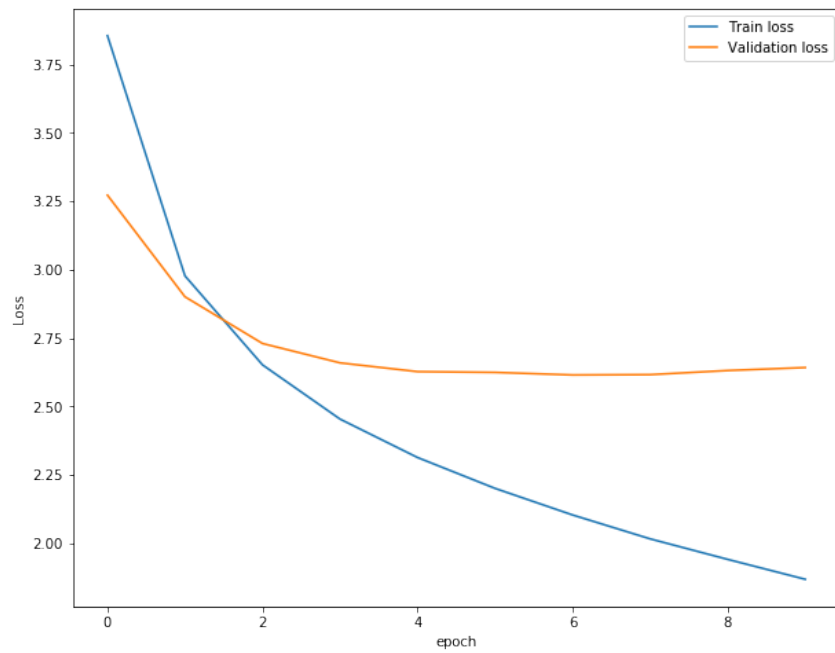


Figure 2: Training and validation loss of vanilla RNN

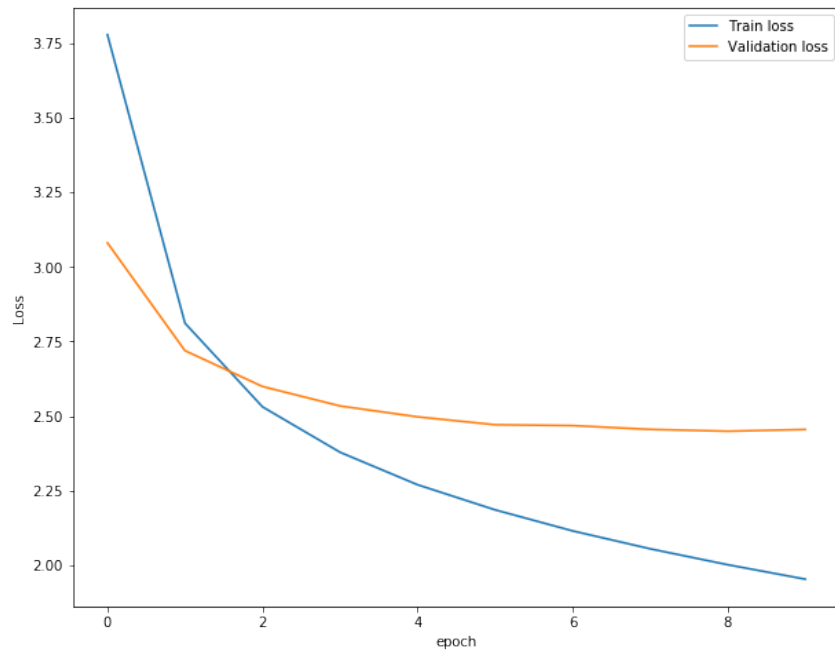


Figure 3: Training and validation loss of vanilla RNN

## 4 Individual Contribution

### Nan Wei

I implement transfer learning with DeepLabv3 and do experiments on basic CNN and DeepLabv3. I also write the report.

**Renjie Shao**

I implement U-Net architecture and do experiments on U-Net. I also help implement IoU and visualization of segmentation and write some parts of the report.

**Hongyi Ling**

I write the code of basic fcn and metrics. I also build different experimental CNN architectures and test these neural networks. In addition, I write these parts of the report.