## **Action prediction** . . .

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#### **Abstract**

Last but not least (this is the last piece of work)

#### 1. Introduction

Brief description of the task and the goals.

## 2. Background

Introduction

#### **2.1. SIMMC**

- 2.1.1 Data description
- 2.2. BERT and Transformers

#### 3. Model

What and why

#### 3.1. Input manipulation

Here we can describe the tensor dataset structure and the tokenized input value, e.g.

[CLS]	Q1	L1			
[CLS]	Q1	<b>A</b> 1	[SEP]	Q2	L2
[CLS]	Q2	A2	[SEP]	Q3	L3
[CLS]	Q3	A3	[SEP]	Q4	L4

Table 1. Sentences composition

The tab. 2 . . .

## 3.2. Added layers - Activation functions

#### 3.3. Loss function

- 3.3.1 Actions
- 3.3.2 Attributes

### 3.4. Tuning

- · epochs
- batches

- learning rate
- . .

#### 4. Results

#### 4.1. Evaluation on test set

Inserire train loss ecc.?

Batch	Epoch	Out Hid.	Act. acc.	Perpl.	Att. acc.	Tr.Loss
14	2	256	84.55	2.09	71.05	
14	2	768	84.97	2.24	73.16	
14	3	256	84.91	2.40	72.50	
14	3	768	84.68	2.43	72.87	
12	4	256	84.25	3.16	73.70	
14	4	256	85.21	2.57	74.70	

Table 2. Result table

# DA PROVARE batch 14 con 4 epoche e 768 livelli di output nell'intermedio

overfitting analysis - plots - confusion matrix

#### 5. Conclusion