

## INTRODUCTION

Automated diagnoses of mental illness using schema therapy leads to faster and better recovery



## RESEARCH QUESTION

How well can a generative algorithm (e.g. RNN based encoder-decoder network) write stories that fit specific schemas?

- Most effective generative algorithms?
- Implementation and optimisations?
- Evaluation and comparison with Allaart’s data

## ALGORITHMS

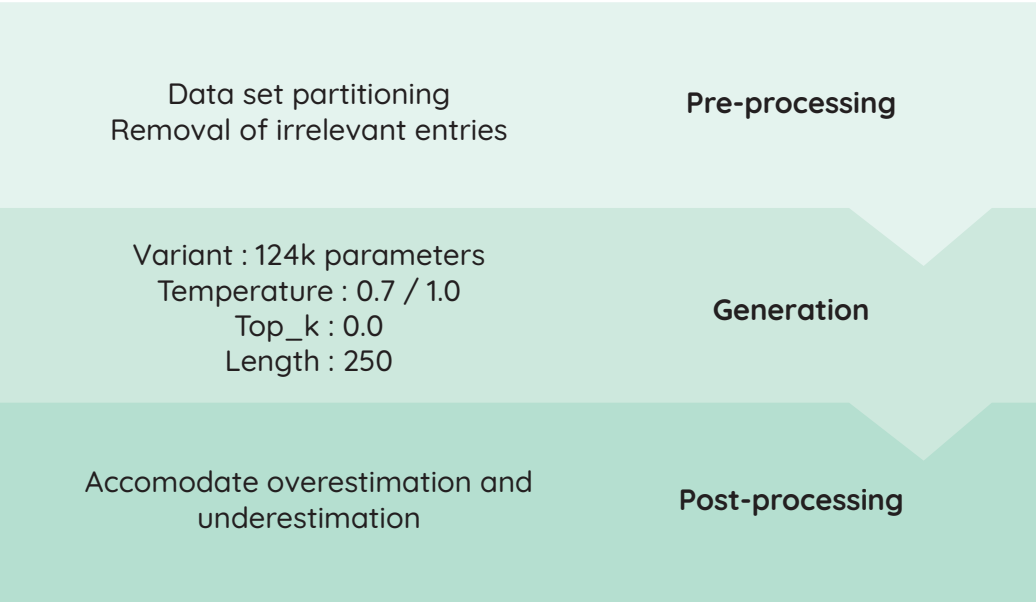
**1.** **OpenAI GPT**  
Transformer model that is pre-trained vast amounts of data and can beat the state of the art in NLP.

**Recurrent neural networks**  
Neural network that exceeds in predicting results of sequential data because of its internal memory **2.**

**3.** **Generative adversarial networks**  
Minimax based model that pits two neural networks against each other to generate the best results

**Best candidate**  
OpenAI GPT is easy to use, is pre-trained and beats other models in 7 out of 8 times during zero-shot NLP tasks

## EXPERIMENTAL SETUP



## RESULT

"i had a wonderful day today because my dads health was good, it lifted my spirits and i felt calm after a fewdays. i would say i was the happiest person i have ever been in a few days because of all the support i had received and i feel grateful to him for"

Coherence: 6/6      Correctness: 4/6

### Schema correctness

	Conditional		Unconditional	
	is_happy	is_angry	is_happy	is_angry
Samples	63	59	63	59
C1 + C2	37	40	4	6
I1 + C2	9	7	3	4
C1 + I2	2	3	45	42
I1 + I2	24	9	10	7

### Story independence

	Conditional		Unconditional	
BLEU	Is_happy	Is_angry	Is_happy	Is_angry
1-gram	0.16	0.09	0.2	0.12
2-gram	5.90e-155	4.06e-155	6.84e-20	1.24e-43
3-gram	4.80e-204	3.58e-204	2.22e-102	5.98e-93
4-gram	1.13e-231	8.84e-232	3.12e-112	9.27e-100

## CONCLUSION

