

# Trend Analysis

A hand holding a pen is pointing to a line graph. The graph has a dark background with three lines: a green line, a blue line, and a red line. The green line starts at the bottom left, rises to a peak, dips, and then rises again. The blue line starts at the bottom left, rises to a peak, dips, and then rises again. The red line starts at the top left, dips, and then rises to a peak before dipping again. The hand is holding a pen and pointing to the green line.

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# Different Approaches!

→ Numeric → For understanding  
trends

→ Textual → For describing text

Numbers → Increase/Dec of Activity.  
or, remain same.

→ Compare timeline (Based on inc/dec)

→ Some entity is growing, that entity is adding to the overall profit. Masking the low growth entity

Why our shift is better than yours?

→ Fed through hard coding (should be easy)

→ LSTM → For text generation

→ Requires data  
→ What is requirement?

→ Name → Strictly good.

Province wise change

Prov	City	Time	Value
X	a	$x_{m1}, x_{m2}, x_{m3}$	$v_1, v_2, v_3 \dots$
	b	$x_{m1}, x_{m2}, x_{m3}$	$v_1, v_2, v_3 \dots$
	c		
Y	d		
	e		
Z	f		
	g		
	h		

Graphy → Province → over a period of time  
→ City → sum over months?

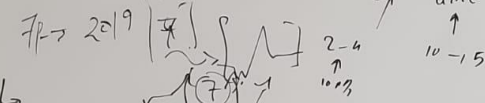
log →

for each province.

→ monthly breakdown

→ Contribution to the total growth.

→ Which province had max growth (%, actual amt)



Date	Value	% ch	trend	num-month
day 1	0	0	0	0
day 2	0	1	1	1
day 3	0	2	2	2
day 4	0	0	0	0
day 5	0	2	2	2
day 6	0	0	0	0

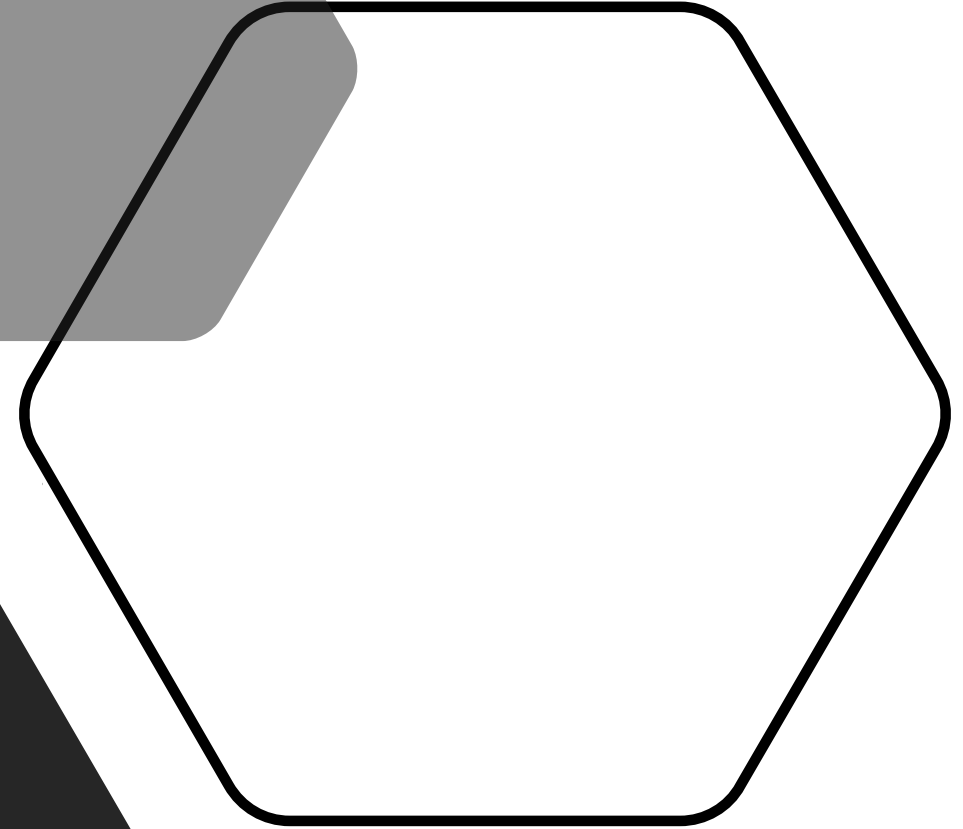
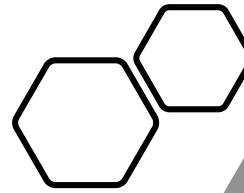
NEURAL NW.

CONVOLUTION

Prov City Year Month Value

CLASSIFICATION

# Design Decision



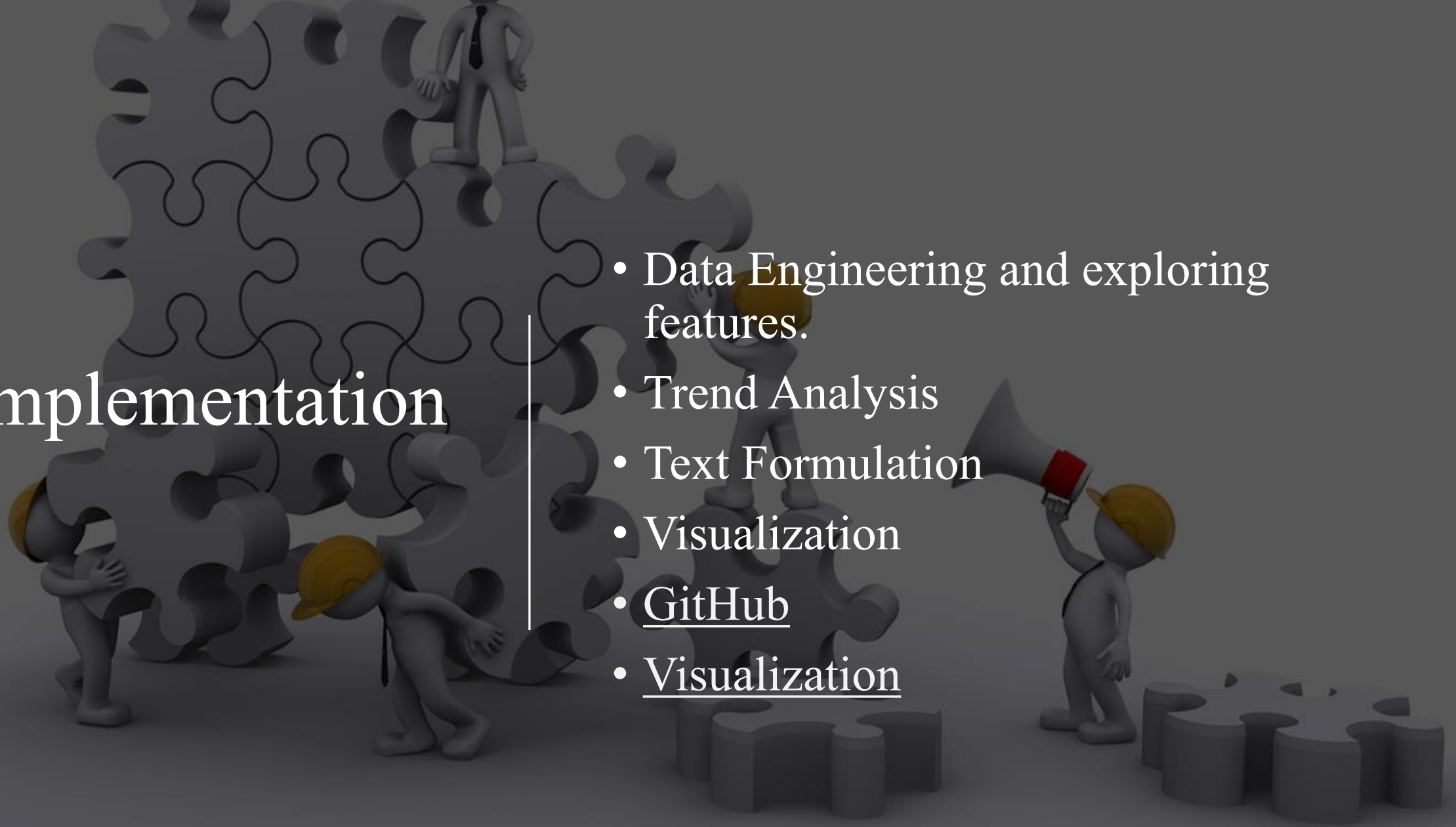
- Legibility and correctness of text is a strict requirement.
- We cannot guarantee that with neural network and there was less data for training a neural net to experiment in first place.

So we

- Drilled down to key indicators of change.
- Created mechanical system for text generation.
- Advantage of this method will be in comparison of texts overtime which in turn will help to track changes in trends if any existed.

# Implementation

- Data Engineering and exploring features.
- Trend Analysis
- Text Formulation
- Visualization
- GitHub
- Visualization







THANK  
YOU ♥