

1. LLM → NLP

Predicts the next token \rightarrow word
 \rightarrow Subword

probabilistic

delearning → absence of skill

RNN

LSTM

The diagram illustrates the decomposition of a 3x3 matrix into a product of three matrices: a permutation matrix, a lower triangular matrix, and an upper triangular matrix. The permutation matrix is shown as a 3x3 matrix with a 1 in the (1,2) position and 0s elsewhere. The lower triangular matrix is shown as a 3x3 matrix with 1s on the diagonal and 0s elsewhere. The upper triangular matrix is shown as a 3x3 matrix with 1s on the diagonal and 0s elsewhere.

A hand-drawn schematic of a parallel circuit. It features two parallel branches connected by vertical wires on the left and right. The top branch contains a light bulb (represented by a circle with a cross) and a switch (represented by two connected circles) in series. The bottom branch contains a single light bulb. On the right vertical wire, there is a battery symbol consisting of four cells (long and short parallel lines). On the top horizontal wire, there is a fuse symbol (a rectangle with a diagonal line through it).

I was born in France

My mother tongue is $\mathbb{Q} \rightarrow \text{French}$

2017 Ashish Vaswani

Attention is all that you need

TRANSFORMERS

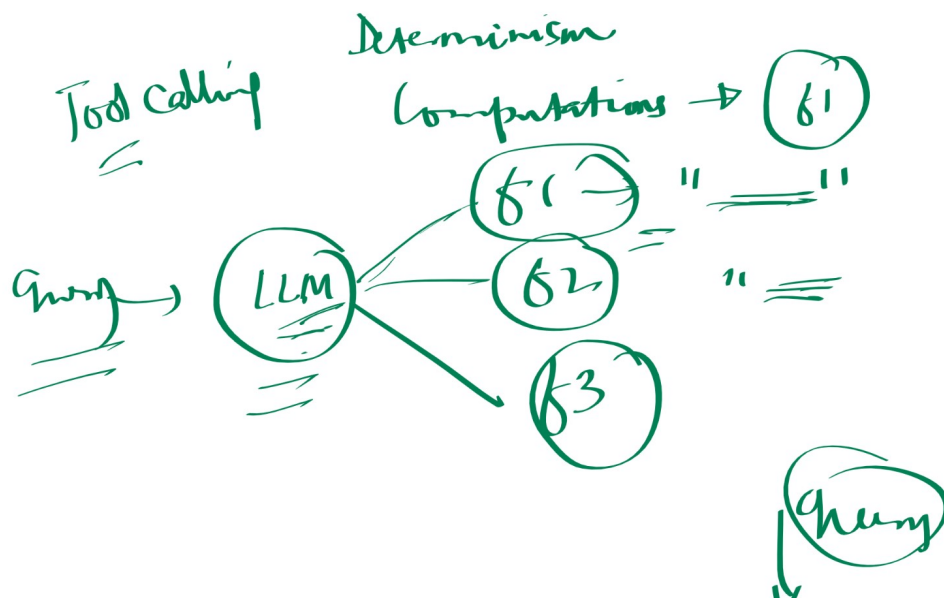
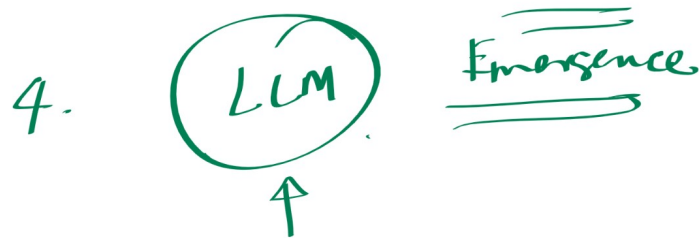
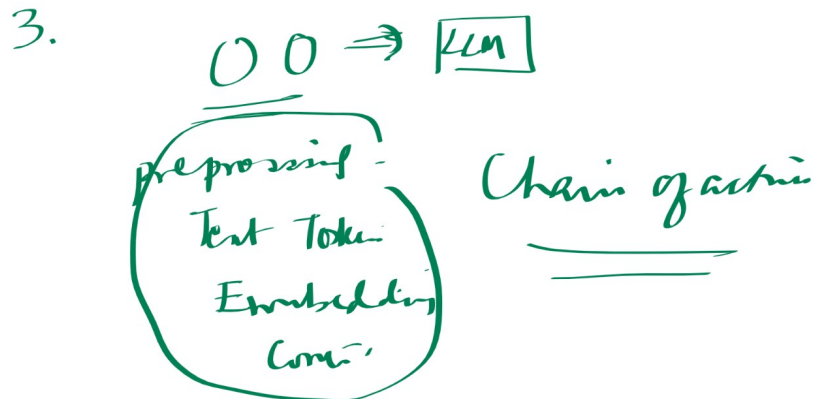
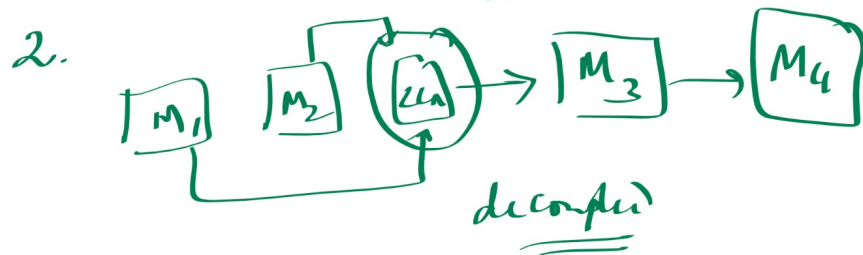
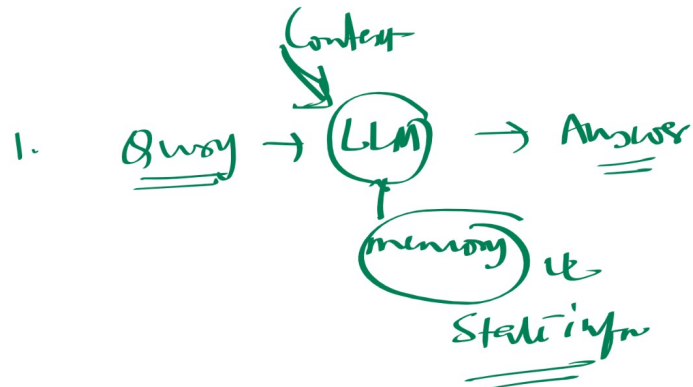
The dog chased the ball and (it) bounnd

GPT

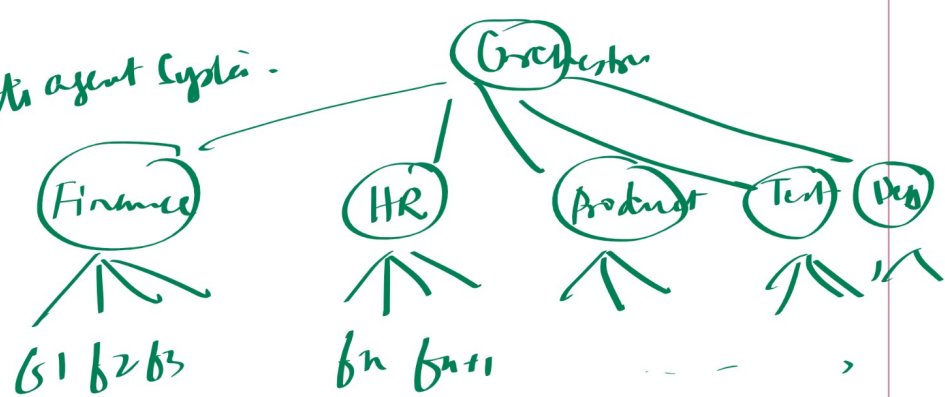
LLM → foundational model

Maximum Likelihood.

Badanov Attention + LSTM → Ashish → Attention
Scene

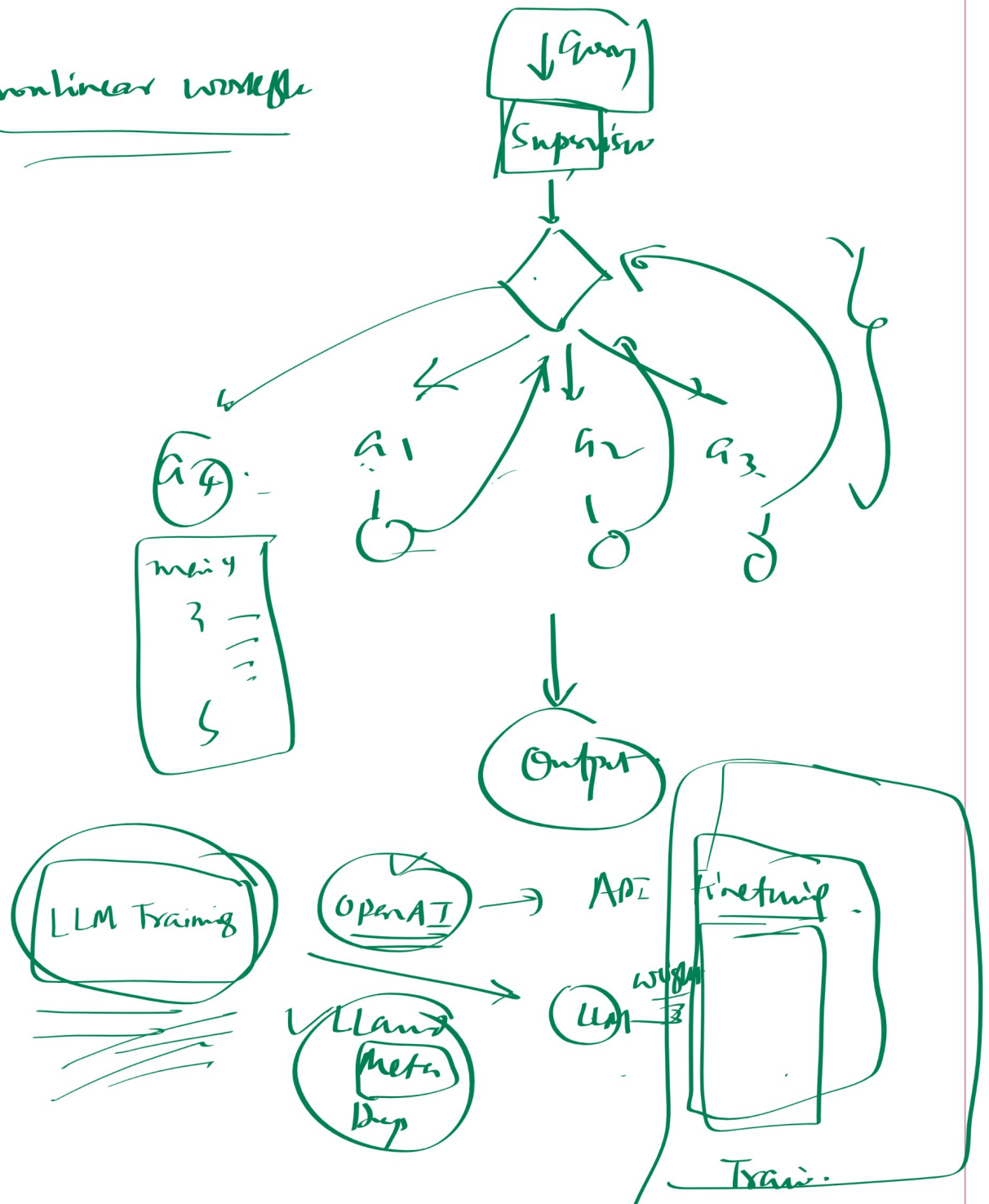


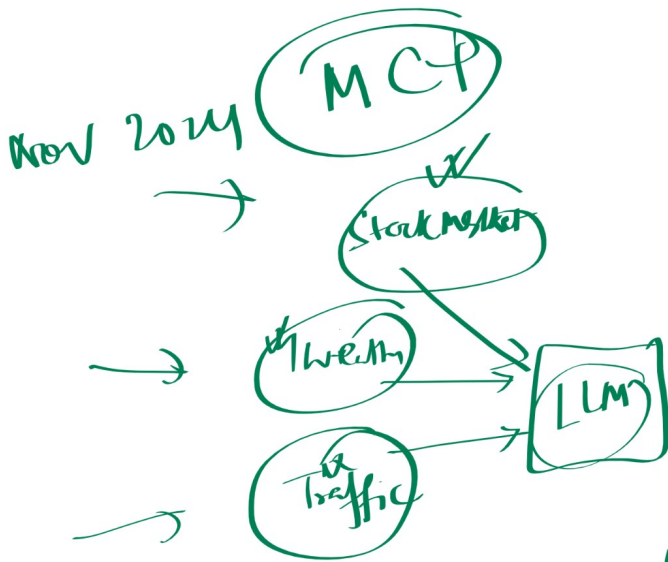
⑤ Multi agent system.



query \rightarrow PP \rightarrow add context \rightarrow LLM \rightarrow answer

nonlinear workflow





Instruction Classification

Content

1. Finetuning → LLMs.

2. Content

→ MCP

→ RAG

→ Prompts



LLM

$$y = mx + c$$

$$y = (m)x + (c)$$

LLM

