

## Crawling

- Web crawlers discover new or updated webpages
- Systematically, continuously browses internet
- Keeps search engine index up to date



## Indexing

- Stores and organizes content in search index
- Analyzes factors for relevance and context



## Ranking

- Provides best, most relevant results for query
- Ranks on relevance, popularity, authority, etc.



- Easy, effective, free
- Comprehensive access
- Relevant results
- Saves time
- Advanced search options



## Pretraining Phase

- Pretrained on massive dataset of text and code
- Learns language patterns, grammar, syntax, and facts

## Subsequent Training Phase

- Predicts the next words in response to a prompt
- Initially, human supervisors oversee or guide the process
- Gradually, model improves its understanding of prompts
- Eventually, it begins to generate high-quality, human-like responses

# Search Engines

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## Reasoning Engines

- Understand and interpret human language
- Provide direct relevant responses