Google Architecture & Technologies, February 2020

Surface Web / Web Pages

Deep Web / YouTube ($10B)

Data Centers

DeepMind

Cloud Computing / AI ($10B)

Google

Crawling / Spidering

Search Algorithms

URLs / Web Pages

Videos

Hadoop / MapReduce

Spark

NoSQL

Indexes

Data Mining / Machine Learning

Deep Learning / Reinforcement Learning

Searchers / Users

Search Interface

PageRank

Vector Space (tf × idf)

Search Logs

Ad Display

Ad Platform

Advertisers / Merchants ($100B)