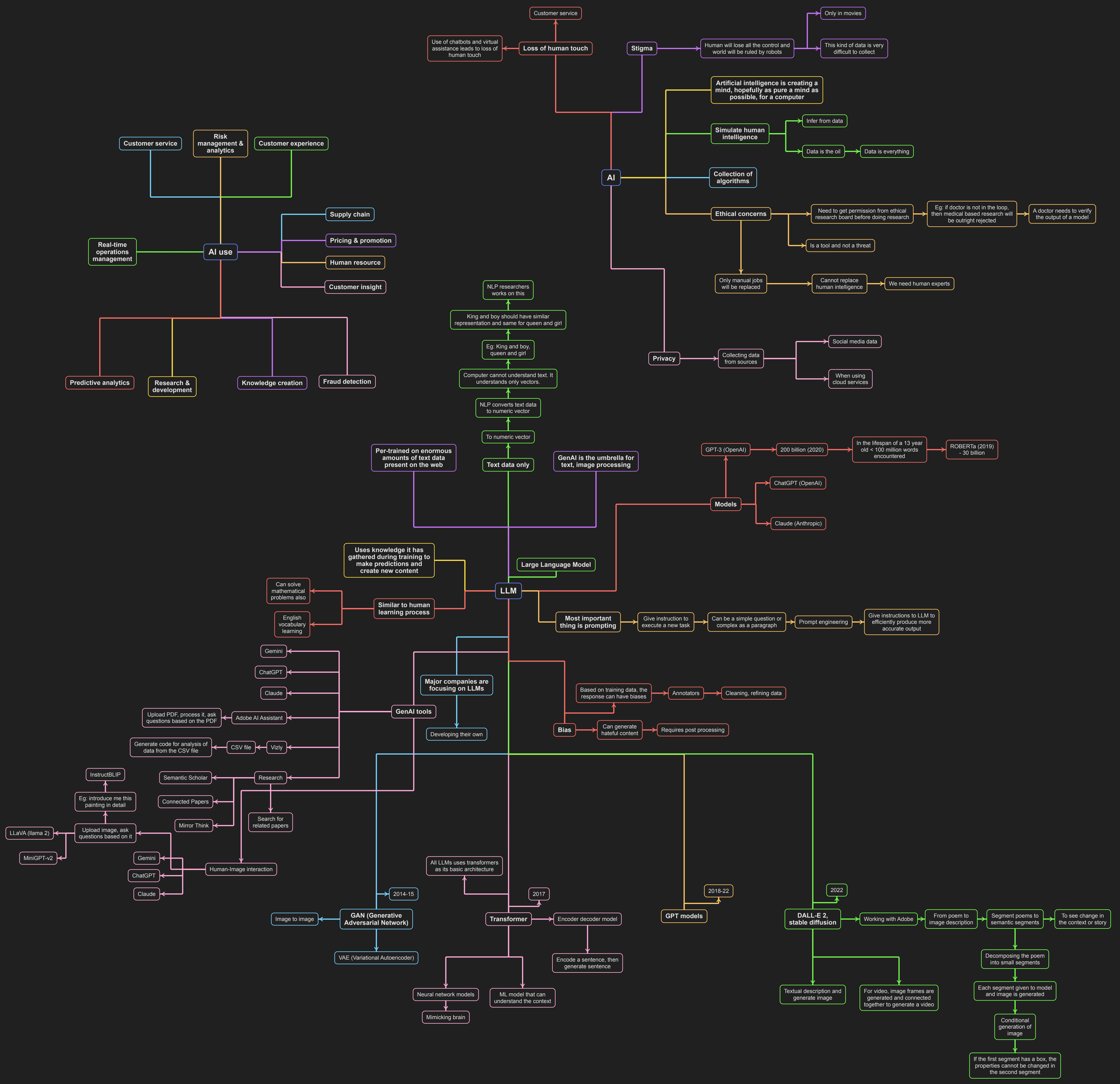
Customer service
Use of chatbots and virtual assistance leads to loss of human touch
Loss of human touch
Stigma
Human will lose all the control and world will be ruled by robots
Only in movies
This kind of data is very difficult to collect
Artificial intelligence is creating a mind, hopefully as pure a mind as possible, for a computer
Simulate human intelligence
Infer from data
Data is the oil
Data is everything
AI
Collection of algorithms
Ethical concerns
Need to get permission from ethical research board before doing research
Eg: if doctor is not in the loop, then medical based research will be outright rejected
A doctor needs to verify the output of a model
Is a tool and not a threat
Only manual jobs will be replaced
Cannot replace human intelligence
We need human experts
Customer service
Risk management & analytics
Customer experience
Supply chain
Pricing & promotion
Human resource
Customer insight
Real-time operations management
AI use
Predictive analytics
Research & development
Knowledge creation
Fraud detection
NLP researchers works on this
King and boy should have similar representation and same for queen and girl
Eg: King and boy, queen and girl
Computer cannot understand text. It understands only vectors.
NLP converts text data to numeric vector
To numeric vector
Text data only
Privacy
Collecting data from sources
Social media data
When using cloud services
Per-trained on enormous amounts of text data present on the web
GenAI is the umbrella for text, image processing
GPT-3 (OpenAI)
200 billion (2020)
In the lifespan of a 13 year old < 100 million words encountered
ROBERTa (2019) - 30 billion
ChatGPT (OpenAI)
Models
Claude (Anthropic)
Uses knowledge it has gathered during training to make predictions and create new content
Large Language Model
Can solve mathematical problems also
English vocabulary learning
Similar to human learning process
LLM
Most important thing is prompting
Give instruction to execute a new task
Can be a simple question or complex as a paragraph
Prompt engineering
Give instructions to LLM to efficiently produce more accurate output
Gemini
ChatGPT
Claude
Major companies are focusing on LLMs
Developing their own
Upload PDF, process it, ask questions based on the PDF
Adobe AI Assistant
GenAI tools
Generate code for analysis of data from the CSV file
CSV file
Vizly
Based on training data, the response can have biases
Annotators
Cleaning, refining data
Bias
Can generate hateful content
Requires post processing
InstructBLIP
Semantic Scholar
Research
Eg: introduce me this painting in detail
Connected Papers
Mirror Think
Search for related papers
LLaVA (llama 2)
Upload image, ask questions based on it
MiniGPT-v2
Gemini
ChatGPT
Claude
Human-Image interaction
All LLMs uses transformers as its basic architecture
2014-15
2017
2018-22
2022
Image to image
GAN (Generative Adversarial Network)
Transformer
Encoder decoder model
GPT models
DALL-E 2, stable diffusion
Working with Adobe
From poem to image description
Segment poems to semantic segments
To see change in the context or story
VAE (Variational Autoencoder)
Encode a sentence, then generate sentence
Decomposing the poem into small segments
Neural network models
ML model that can understand the context
Textual description and generate image
For video, image frames are generated and connected together to generate a video
Each segment given to model and image is generated
Mimicking brain
Conditional generation of image
If the first segment has a box, the properties cannot be changed in the second segment
Date
Sun, 22 Sep 24