



BUILD WITH PURPOSE,  
BUILD IT NOW

# In its own words

There are three key concepts of Gen AI according to ChatGPT 4.0 shown here but in summary:

*I am evolving fast, I present lots of new opportunities, but I need care and consideration*

## 2. Challenges and Ethical Considerations

- **Quality and Authenticity:** Ensuring the generated content is of high quality and indistinguishable from human-created content.
- **Bias and Fairness:** Generative models can perpetuate or even amplify biases present in their training data.
- **Misuse and Deepfakes:** Potential for creating misleading information or deceptive media, such as deepfakes, which are highly realistic synthetic videos or audio recordings.

## 1. Models and Algorithms

- **Generative Adversarial Networks (GANs):** These involve two neural networks, a generator and a discriminator, that work against each other. The generator creates new data, while the discriminator evaluates its authenticity. Over time, this adversarial process improves the generator's outputs.
- **Variational Autoencoders (VAEs):** These models learn to encode data into a compressed format and then decode it back into data. They are particularly useful for generating new data points similar to the original dataset.
- **Transformers:** Used extensively in natural language processing (NLP), transformers like GPT (Generative Pre-trained Transformer) are trained on large text corpora and can generate human-like text based on the input they receive.

## 3. Application

- **Text Generation:** Producing articles, stories, or even code snippets. GPT-3 and GPT-4 are prominent examples of text-generating models.
- **Image Generation:** Creating artwork, realistic photos, or designs. Tools like DALL-E and MidJourney use this technology.
- **Music and Audio Generation:** Composing music, generating realistic speech, or creating sound effects.
- **Data Augmentation:** Creating synthetic data for training other machine learning models, useful in scenarios where real data is scarce or expensive to obtain.



## In her own image

This is what the Midjourney Bot came up with from the prompt 'generative AI'

*Saintly, mystic, ecstatic, the truth*





## GenAI in the London Market

Can we imagine AI being used to match underwriter appetite and capacity to customer risks? Could it enable straight-through processing and placement for at least some classes?

# The promise of AI

Artificial intelligence has been with us for a long-time now, since the '50s. Its been through a series of cycles of optimism and 'winters', but funding has greatly increased since 2012 (deep learning, pattern recognition) and 2017 (transformer architecture, attention mechanism). Great things are promised:

*In 3-8 years we will have a machine with the general intelligence of an average human being*

- Marvin Minsky, MIT computational scientist

*My timeline is computers will be at human levels, such as you can have a human relationship with them, 15 years from now*

- Ray Kurzweil, futurist & Googler

# It's polarising

## AI: The Bad

- Mass unemployment
- Biowarfare, pandemics, nuclear war
- The Terminator

## AI: The Good

- Mass unemployment or at least more employment in better jobs
- Robotaxis, eradication of disease, androids
- The Singularity

# First small steps

## Knowledge Assistants

- Trained on policy documents, MRCs, spreadsheets, manuals, Wikis, intranet
- Small effort and then available to all, highly scalable and with the benefit of natural language answers
- Search but better

## Unstructured Data

- Reading and curating unstructured data
- ChatGPT-4 allows for easy PDF upload
- Not a substitute for digitising data and integrating systems but something that users can do out of the box

# Giant leaps?

## Automated Pricing

- Correlation of inputs (quotes) to outputs (takeup by capacity and pricing)
- Standardized data for price generation based on similarities to what we have seen before
- Complexity is the challenge but the promise is freeing up underwriting capacity

## Timely Data

- With data curation and standards, we could have data in place at the point of bind which would allow for the creation of reliable indices

## Smart placement

- AI could assist in matching a desire for cover to an appetite for risk
- With AI looking over bulk data market, it could suggest matches between brokers and underwriters

## Straight-through processing

- Claims automation from picture of damage through to settlement

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