

How LLMs are Transforming the Future of Fin-tech

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What are LLMs and its trends



Applications of Gen AI in Fintech



Risks and Mitigations of Gen AI for Fintech



Future Trends

Al vs ML vs DL vs GenAl vs LLMs??

Al vs ML vs DL vs GenAl vs LLMs



imaflip.com

Al vs ML vs DL vs GenAl vs LLMs

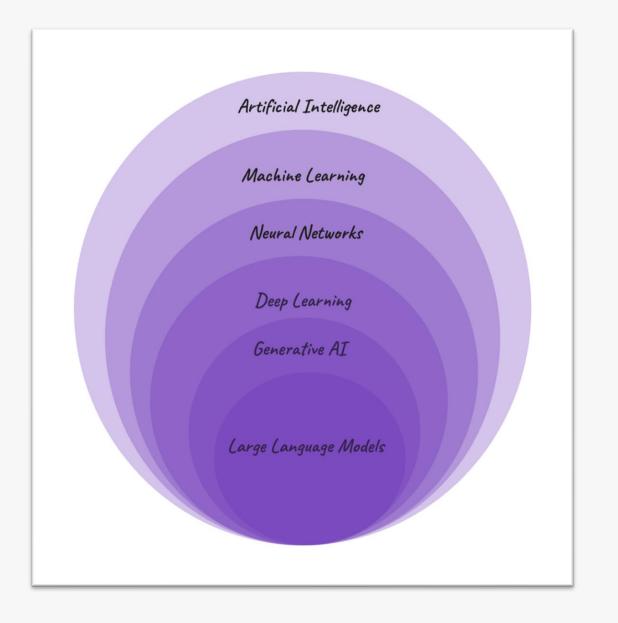
AI (Artificial Intelligence): The broader concept encompassing all technologies that mimic human intelligence, including reasoning, problem-solving, and decision-making.

ML (Machine Learning): A subset of AI focused on training algorithms to learn patterns from data and make predictions or decisions without explicit programming.

DL (Deep Learning): A subset of ML that uses neural networks with multiple layers (hence "deep") to model and solve complex problems, such as image recognition and natural language processing.

GenAl (Generative Al): A category of Al that generates new content, such as images, text, or music, based on the data it has been trained on, using models like GANs and transformers.

LLMs (Large Language Models): A type of GenAI specifically focused on language, trained on vast datasets to understand, generate, and manipulate human language, often with billions of parameters (e.g., GPT-3).



Evolution of LLMs

| Model | Provider | Open-Source | Speed | Quality | Params | Fine-Tuneability |
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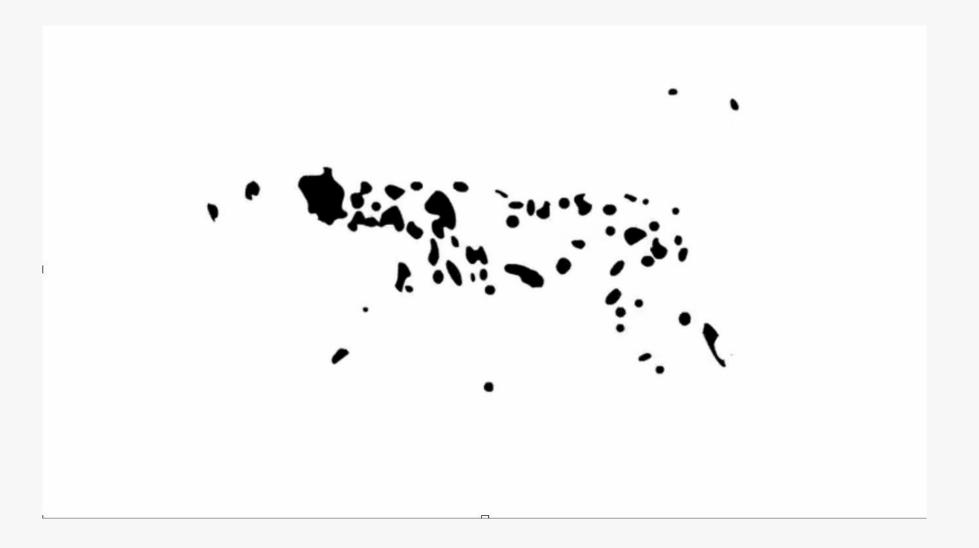
Al Model Trained With 174 Trillion Parameters

January 11, 2023 by Brian Wang

The BaGuaLu AI system used the Chinese Sunway exaflop supercomputer to train the largest AI model with over 174 trillion parameters. The miraculous capabilities of neural net AI systems like ChatGPT (AI generate novel text and stories) and Dall-E (AI generate novel pictures) and Alphafold2 (protein folding) comes from the growth of the AI models. Going to 100 trillion parameters means you can do things like take all of the text data of the internet or all of the pictures or all of the videos and learn from those massive datasets.



How our Brain identifies Missing Values



Missing Data In Finance



KYC

We know a customer through the KYC.

Often data is incorrect; even if correct, it is not complete information about customer



Transactions

We also have insights about some transactions of the customer. We miss out on many transactions that may not be happening through our platform





Past Experiences

We have information about how customers have behaved in the past; who is a good customer; who cannot be relied upon



External Information

Which jobs and occupations are stable and safe; what is the trend going forward; how is the market and competition doing

While we have many information sources, they are all disparate and incomplete

We need a brain that can work even with incomplete data!





Customer Service and Support

LLMs are used to automate customer interactions via chatbots and VAs

Fraud Detection

Generative AI can be used to generate realistic but fake data to help train models for detecting fraudulent transactions to capture new and evolving patterns



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Generative AI can simulate various financial scenarios and market conditions to help companies and individuals assess risk and make more informed decisions

Portfolio Management

Generate personalized investment recommendations based on a user's risk tolerance, financial goals, and market trends.

Credit Scoring

Simulate different credit scenarios and assess risk more accurately to make more informed lending decisions and provide fairer credit scoring.

Personalized Financial Planning

Create customized financial plans for individuals by analyzing data about their income, expenses, and goals.

Compliance and Regulatory Monitoring

Automating compliance checks and monitoring regulatory changes.

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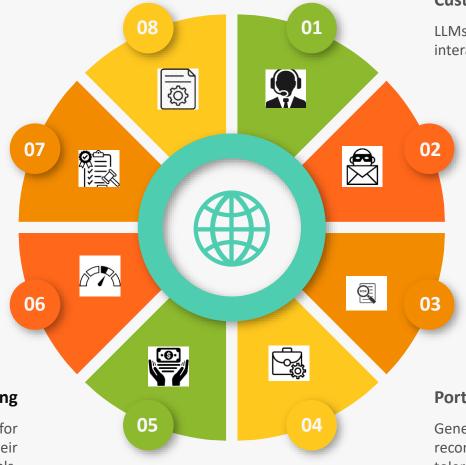
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Document Analysis and Automation

Process and analyze complex financial documents to extract key information and automate compliance and reporting tasks.

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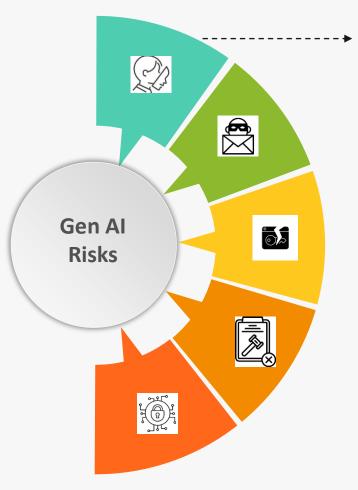




Risks

Deepfake-based Fraud

Risk of convincing deepfakes videos and audios leading to unauthorized access and fraudulent transactions.



Risks

Gen Al © 200 Risks

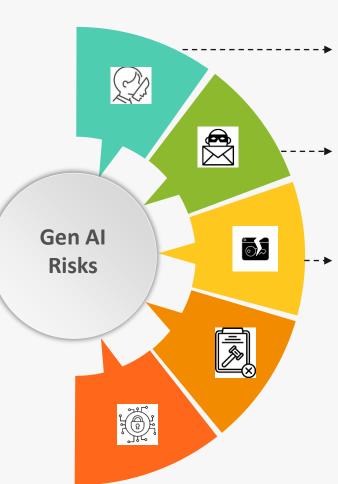
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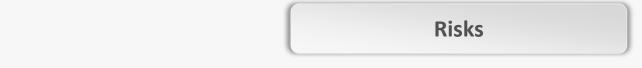
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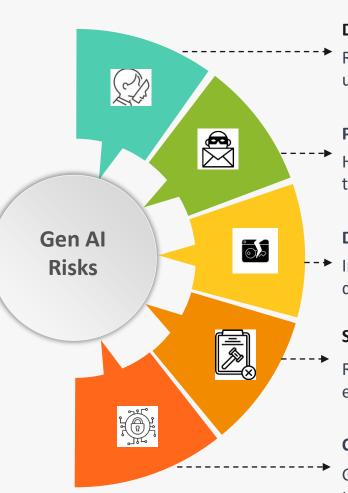
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Gen Al

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Generative AI introduces new potential vulnerabilities that can be exploited by cyber attackers.

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Preventive Measures

Advanced Authentication

Implement multi-factor and biometric authentication for robust user verification.

Fraud Detection Systems

Deploy Al-driven fraud detection systems to identify and prevent fraudulent activities

Al Model Explainability

Prioritize explainable AI models for transparent decision-making processes.

Employee Training

Provide ongoing training to employees on cybersecurity best practices and ethical AI use.

Robust Cybersecurity Measures

Implement advanced cybersecurity protocols to protect against unauthorized access and security vulnerabilities

Gen Al

Risks

Future Trends of Gen Al

Smaller, More Efficient Models

make deploying generative AI more feasible for a wider range of applications, including those in edge computing and IoT devices.



Multimodal Learning

Future Gen AI move towards a more human-like understanding by processing and generating information across various formats like text, audio, video, and even sensory data.

Democratization of AI Tools

More accessible and user-friendly AI tools, allowing a wider range of people and organizations to leverage AI's potential.

Explainable and Transparent Al

Future Gen AI might come with built-in explainability features, allowing users to see the reasoning behind its actions.



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