imas
**INVESTMENT MANAGEMENT
ASSOCIATION OF SINGAPORE**

IMAS Investment Conference & Masterclass 2024

Masterclass 1

Navigating the Future of Asset Management: Leveraging Generative AI and Large Language Models (LLMs)

Master Class: Generative AI in Asset Management – Opportunities, Risks, and Ethical Considerations, 27 March 2024

Outline

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Synopsis:

This masterclass addresses the growing impact of generative AI especially Large Language Models (LLMs) in the asset management industry. It will focus on how AI can augment and improve customer experience and investment processes, highlighting both opportunities and challenges. Amundi and Amazon Web Services (AWS) will provide real customer use cases. Special emphasis will be placed on difficulties involved with adopting this technology, including risk, regulation, and ethical considerations.

Target Audience:

The session is designed for CTOs, CIOs, and investment professionals in the finance sector, especially those in asset management, who are keen to understand the strategic implications of Generative AI.

Learning Outcomes:

- Understand the role of AI and LLMs in investment management.
- Identify opportunities where AI can augment and enhance investment management activities.
- Recognize the potential challenges and risks of using LLMs in the asset management industry.
- Learn from and discuss strategies to adopt this technology in real use cases, including managing risks, regulation, and ethics.

Trainers:

- **Leslie Teo**, Senior Director, AI Products, AI Singapore

- **Lucas Bouziat**, Business Development Manager Asia at Amundi Technology and Managing Director of Fund Channel Asia, Amundi
- **Stuart Loy**, Solutions Architecture Leader, Global Financial Services, AWS
- **Xan Huang**, Senior Solutions Architect, Global Financial Services, AWS

Session Outline:

Part 1: Introduction to Generative AI in Finance (2.00pm to 2.45pm)

Led by *Leslie Teo*

1. Overview of Generative AI** (20 mins)

Definition and Scope

- Explain Generative AI as a subset of artificial intelligence focused on creating new content, data, or models
- Differentiate between Generative and Discriminative models.

Evolution of Generative AI

- Brief history of Generative AI development.
- Mention key milestones, such as the development of GANs (Generative Adversarial Networks), and breakthroughs in natural language processing.

Technologies and Algorithm

- Introduce basic concepts of the technologies behind Generative AI, like neural networks, deep learning, GANs, and reinforcement learning.
- Explain how these technologies work in layman's terms. Explain why these understanding can help better appreciate the usefulness and failings of Gen AI.

Current State and Trends

- Highlight the latest advancements and trends in Generative AI.
- Discuss the increasing capabilities and complexity of these systems.
- Discuss hallucinations, mis-use, and other concerns.

2. Impact of AI on the Investment Landscape - Potential and Challenges (25 mins)

Better Experiences for Customers

- Tailored Investment Advice and other forms of personalization: Discuss AI's role in creating customized investment plans based on individual risk profiles and preferences.
- Customer Service: Explain how AI chatbots and virtual assistants can enhance customer engagement and service.

Decision Support

- Improved search & insight generation: Discuss how retrieval-augmented-generation and improve search
- Better analytics which includes unstructured data
- Risk Assessment and Management: Discuss the use of AI in modeling complex financial risks and predicting market trends, as well as generating scenarios.
- Fraud Detection: Illustrate how AI can identify patterns indicative of fraudulent activities more efficiently than traditional methods.

Operational Efficiency

- Process Automation: Highlight the role of AI in automating mundane tasks, leading to cost reduction and increased efficiency.

Challenges and Considerations

- Scaling/Production: Implementing solutions at scale.
- Data Privacy and Security: Emphasize the importance of securing sensitive financial data in AI applications.
- Ethical Concerns: Discuss potential biases in AI models and the need for ethical AI frameworks.
- Regulatory Compliance: Address the importance of complying with financial regulations and standards when implementing AI.

Future Outlook

- Multi-modal AI and agents that can do tasks

Break (2.45pm – 3.00pm) (15 mins)

Part 2: Deep Dive into AI-Enhanced Solutions in Asset Management (3.00pm to 4.00pm)

Led by *Amundi* and *AWS*

Case Study 1: From Discussion to Action, Amundi (30 mins)

Led by *Lucas Bouziat*

This case study will cover the Transformative Use Case covering *Artificial Intelligence in Action* at Amundi*

- How does Amundi develop Generative AI?
- How does Amundi integrate AI in its operations and strategies?
- Amundi will run through their real world use case of AI Compliance Assistant covering:

1. Process
2. Results
3. Perspectives

- Key takeways: Critical success factors and overcoming challenges

Case Study 2: Uncovering Hidden Connections in Unstructured Financial Data, AWS (30 mins)

Led by *Stuart Loy* and *Xan Huang*

AWS will demonstrate a GenAI powered prototype that has been developed for Asset Managers. The solution will automatically generate a knowledge graph of relationships between entities from analysis of corporate documents using a large language model provided by Amazon Bedrock. Such a knowledge graph has many potential uses, this prototype will demonstrate how GenAI can again be used in combination with the knowledge graph to alert an asset manager to news articles that have second and third order relationships to entities the asset manager tracks while also providing sentiment analysis.

This case study addresses a real-world challenge in the asset management space where human labour is often spent on tedious tasks. As such it increases automation and acts as a productivity enhancer.

Discussion & interaction: AWS will walk through the solution from a business perspective before providing a live demo. Following which we will open for questions & discussion.

Part 3: Implementing & Managing Risks with Gen AI Applications (4pm to 5pm) (60 mins)

Panel Discussion with Amundi and AWS on implementation, risks, ethics, and related challenges

Moderated by *Leslie* with *Lucas* and *Stuart*

1. The hype regarding Gen AI and LLMs has been great. There is a lot of interest, but probably hesitation and suspicion. What in your views are some things organizations have done to adopt and do ueful things with Gen AI and LLMs?
2. This technology is evolving rapidly; how do you keep the tecnical team, developers, up to date, if not the whole organizaiton?

3. There are probably many POCs using LLMs. It's easy to do, but few solutions are in production? Why is that? What does it take to go from a POC to something that is used daily and can be relied on?
4. What are some risks that one has to be aware of when using Gen AI and LLMs?
5. What are the data privacy and security concerns?
6. In particular, how do we deal with hallucinations and biasness?
7. Are there regulatory and compliance requirements that are specific to this AI technology?
8. Do I need to really have an AI strategy? Why not wait and just follow?

Closing Remarks and Q&A (5pm to 5.10pm)

Conclusion and re-emphasizing the main points on LLM's potential but also challenges with implementation such as managing adoption and risks.

Pre-Readings:

- A selection of articles and reports on LLMs and Gen AI in asset management.

Additional Notes:

- The session will be interactive, with opportunities for Q&A, polling, and group discussions.
- Case studies and panel discussions will involve real-world scenarios and practical insights from industry experts.