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Oracle Cloud Infrastructure 2024 Generative AI Professional

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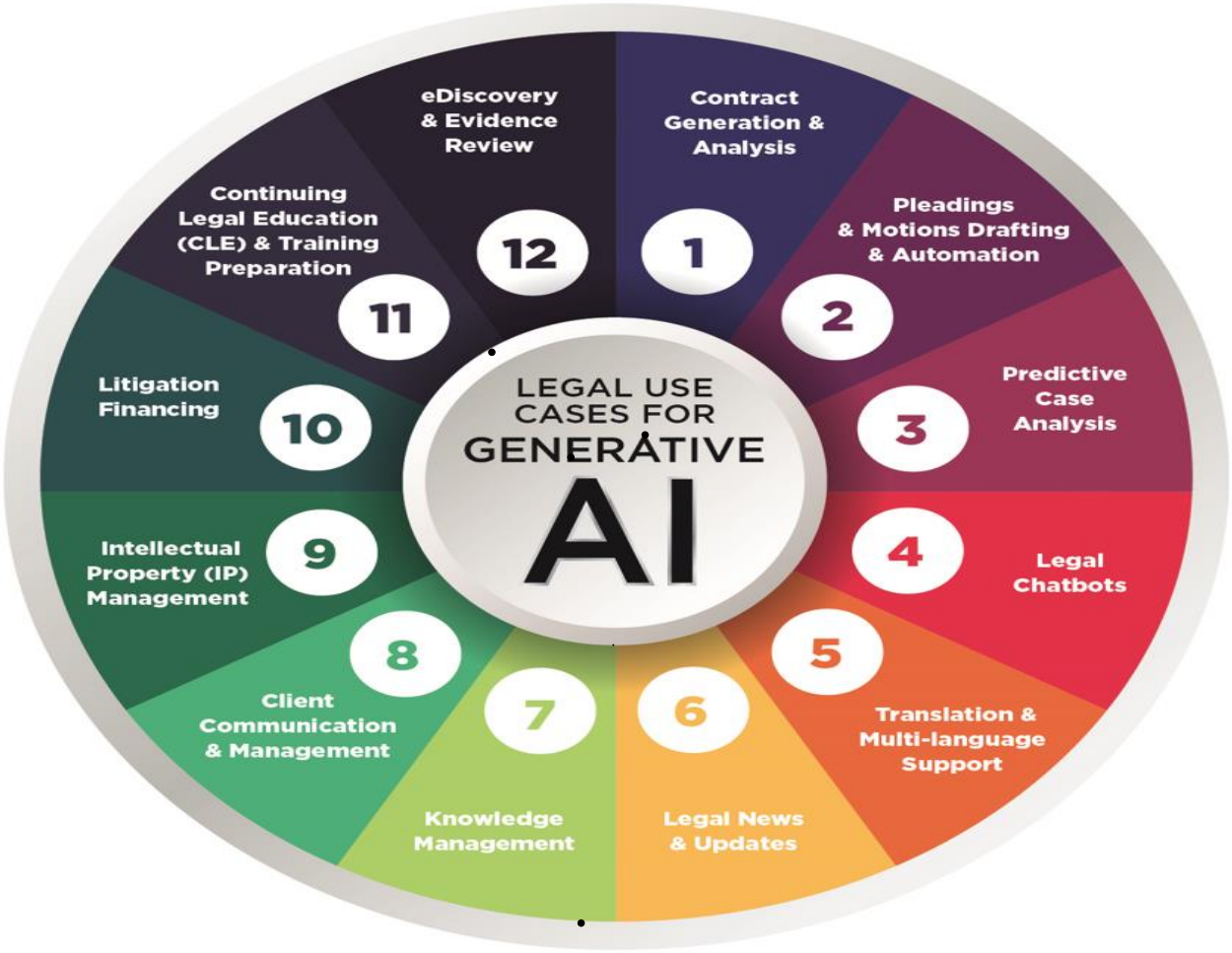
TOPICS TO BE COVERED

1. Introduction to OCI and Generative AI
2. Understanding Generative AI
3. Key Features of OCI for AI
4. Challenges and Solutions
5. Certification
6. Conclusion and Future Scope
7. References



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OCI and Generative AI

Oracle's Cloud Platform-

- OCI is Oracle's cloud platform, providing a comprehensive suite of cloud services designed to run any application or workload efficiently.
- Key services include compute, storage, networking, databases, security, and

  AI/ML tools.
- Known for high performance, cost efficiency, and enterprise-grade security.

Generative AI-

- **Generative AI** involves using machine learning models to generate new data,

  such as text, images, and audio.

Popular techniques include:

- Generative Adversarial Networks (GANs)
- Autoencoders
- Transformer models like GPT (Generative Pre-trained Transformers).

Key Features of OCI for AI

1. High-Performance Compute

Offers **Bare Metal** and **Virtual Machines** with high scalability.

2. Flexible Storage Options

Object, Block, and File Storage solutions designed for high-speed data access.

Scalable storage to handle large datasets required for AI model training.

3. Integrated AI & ML Services

OCI Data Science provides tools to build, train, and deploy machine learning models.

Pre-trained AI models for tasks such as image recognition, anomaly detection, and natural language processing.

4. Secure and Compliant Environment

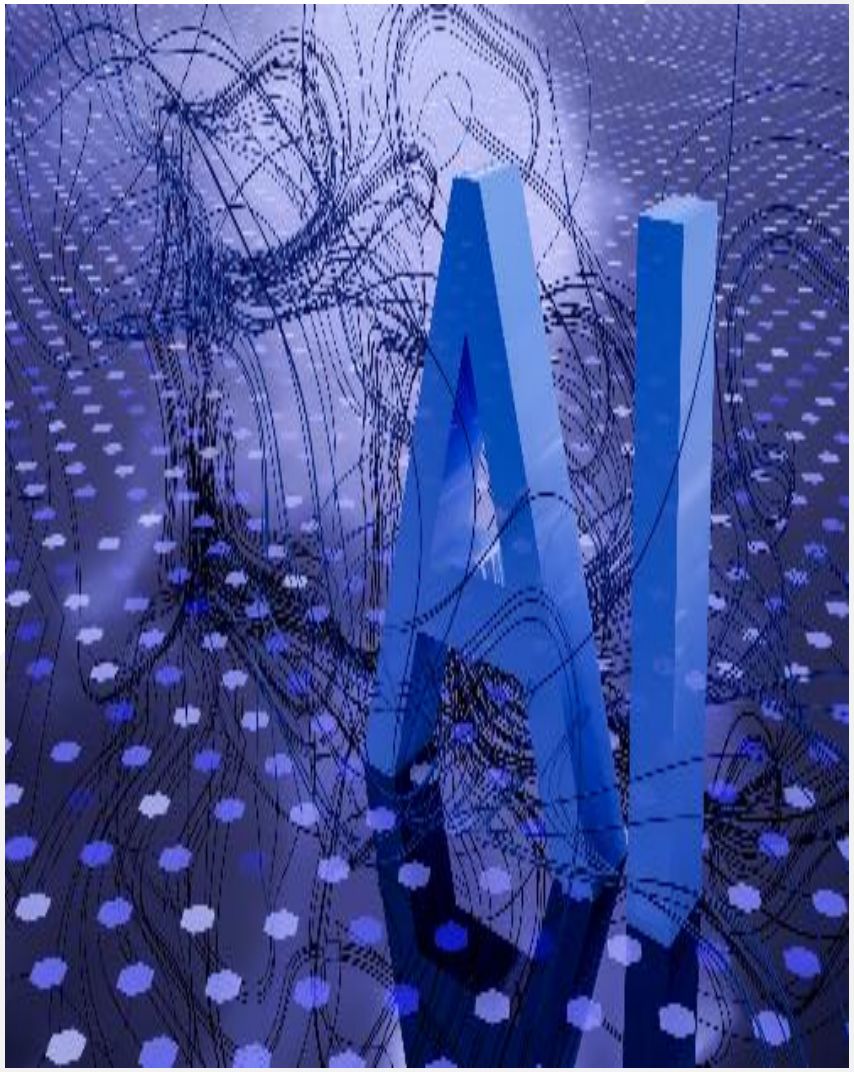
Built-in security features such as **Identity Management, Encryption, and Firewalls**.

Compliance with global data privacy standards.

Challenges and Solution

Computational Power

- **Challenge**: Generative AI models, especially large ones like GPT, require massive computing power for training and deployment.
- **Solution**: Leverage OCI's high-performance **GPU Instances** and **bare metal servers** to meet the demands of AI training.
- **Model Interpretability**
- **Challenge**: Understanding how generative AI models make decisions can be difficult, creating trust issues in critical applications.
- **Solution**: Use explainable AI tools and techniques (e.g., SHAP, LIME) alongside OCI's data science services to improve model transparency.
- **Security Risks**
- **Challenge**: Generative models can be used to create deepfakes or malicious content, raising security concerns.
- **Solution**: OCI's **security layers** (encryption, identity management) ensure secure deployment of AI models and help prevent misuse.



Certification

ORACLE
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Oracle Certified Professional
Certificate of Recognition

ORACLE Certified Professional

Aditi Pandey

Oracle Cloud Infrastructure 2024 Generative AI Certified Professional

This certifies that the above named is recognized by Oracle Corporation as Oracle Certified.

July 25, 2024
Date

Damien Carey
Senior Vice President, Oracle University

This eCertificate is valid until July 25, 2026

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