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INTEGRATING GENERATIVE AI MODELS INTO YOUR APPS WITH AMAZON BEDROCK

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Learn More About Amazon Bedrock

AWS Bedrock: https://aws.amazon.com/bedrock/

Resources: https://aws.amazon.com/bedrock/resources

User Guide: https://docs.aws.amazon.com/bedrock/latest/userguide

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Goals for this Session

- Introduction to AWS Bedrock
- Exploring Models
- Explore AWS Console Tools
- Incorporate Models into Python Code

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Introduction to AWS Bedrock

What is AWS Bedrock?

Amazon Bedrock is an easy-to-use service that helps you work with advanced generative AI models without needing to manage servers or complex infrastructure. It allows you to access a variety of powerful AI models, so you can choose the one that fits your needs.

With Amazon Bedrock, you can quickly start building applications that use AI for tasks like generating text, answering questions, or summarizing information. You can also tailor these models to work with your own data and smoothly integrate them into your applications using tools available in Amazon Web Services (AWS). It's a simple way to explore and build with AI, even if you're new to these technologies.

Source: Amazon Web Services

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AWS Bedrock Capabilities

- **Flexible AI Models**: Choose from ready-to-use foundation models or customize them with your own data to fit your specific needs.
- **Interactive Tools**: Experiment with AI in a user-friendly environment for chat, text, and images directly through the web console—no setup required.
- **Built-in Safety Features**: Use safeguards like watermark detection and guidelines to ensure AI outputs are secure and appropriate.
- **Streamlined Automation**: Easily build applications with automated workflows and smart agents powered by knowledge bases.
- **Easy Testing and Deployment**: Evaluate model performance and set up reliable systems with dedicated resources for smooth operation.

Source: Amazon Web Services

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Three Key Benefits of AWS Bedrock

- **Quickly Build with AI Models:** Create applications using advanced AI models without needing to manage complex systems.
- **Keep Your Applications Secure:** Build AI-powered tools with safety features to protect your data and ensure reliable results.
- **Personalize with Your Own Data:** Use your organization’s data to customize AI models and create tailored experiences for your needs.

Source: Amazon Web Services

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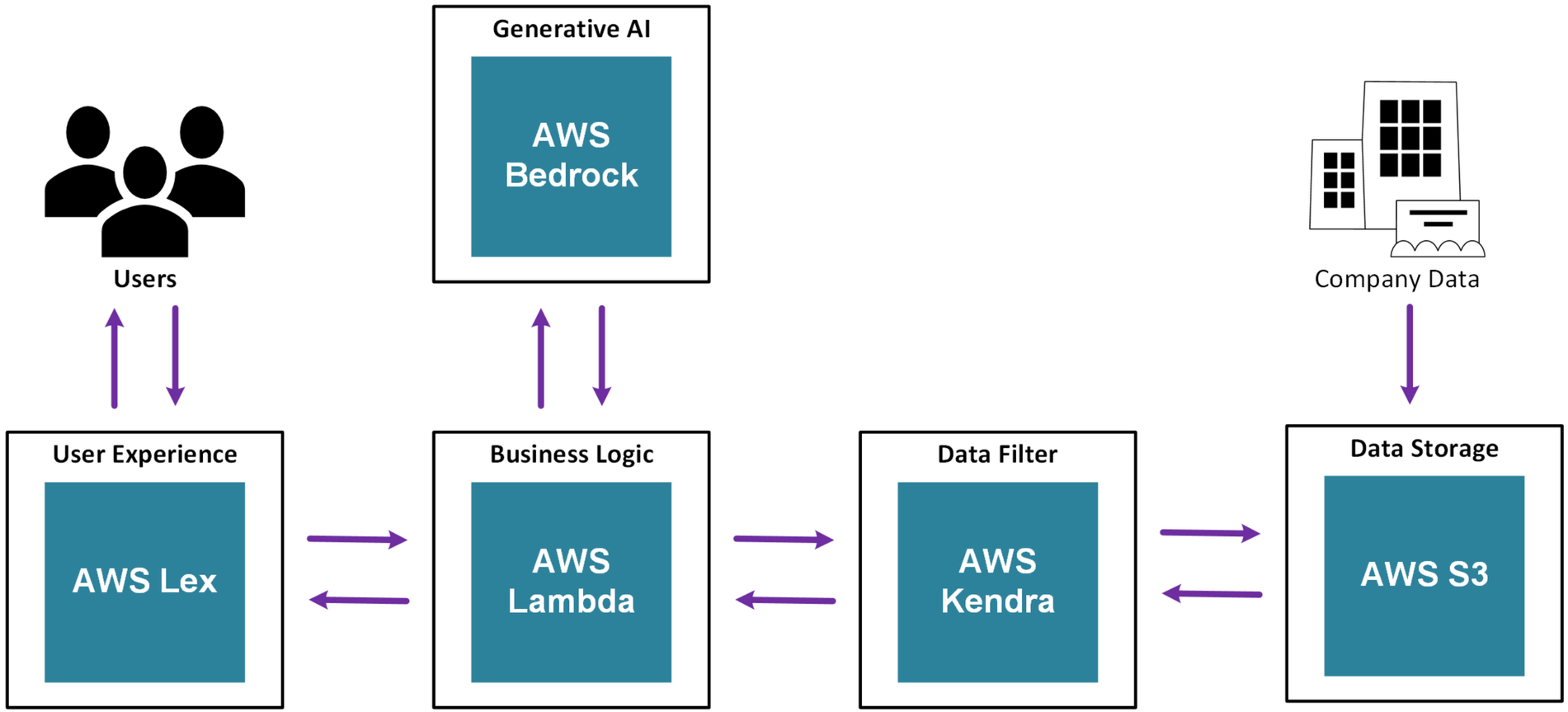
Bedrock App Example Architecture



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Common AWS Bedrock Use Cases

- **Text Generation**: Create AI-driven content, such as articles, emails, or creative writing, using natural language processing.
- **Virtual Assistants**: Build smart chatbots or voice assistants that can handle customer inquiries or perform tasks.
- **Text and Image Search**: Enable applications to find relevant text or images quickly based on user queries.
- **Text Summarization**: Automatically summarize long documents or articles into concise, meaningful summaries.
- **Image Generation**: Design AI tools to create custom images or graphics from text descriptions.
- **Guardrails**: Implement safety measures to ensure AI-generated content is accurate, secure, and aligned with ethical guidelines.

Source: Amazon Web Services

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How to use Amazon Bedrock

- AWS Console
  - Gain access to and manage foundation models
  - Configure safeguards, orchestration, model assessment, and deployments
  - Experiment with models through playgrounds
- AWS Bedrock API
  - AWS CLI
  - AWS SDKs
  - AWS SageMaker Notbooks

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AWS Bedrock Demo

Let's Explore AWS Bedrock!

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AWS Bedrock Programming Next Steps

- Explore the Bedrock Service in AWS
- Read the Bedrock Documentation
- Try out the Bedrock Examples
- Run the code from the webinar and explore it on your own
- Incorporate it into your next project!

Download the Code

github.com/cc-xebia-webinars/amazon-bedrock-webinar_11192024

slides and source code available

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Q&A

Questions?

Thank you!

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