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How Nykaa automates product descriptions using generative AI

Ravi Bagal
(he/him)
General Manager, Retail and Consumer Goods
AWS

Abhishek Awasthi
(he/him)
Senior Vice President, Engineering
Nykaa

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Agenda

01 From POC to production

02 Why AWS?

03 Nykaa’s generative AI success

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2023
The year of POCs

What is generative AI?

Is this secure?

Do I need to become a prompt engineer?

How do I choose a model?

Where do I get started?

What does this mean for my business?

What is a Foundation Model?

Which models should we try out?

What is FM?

What is a Large Language Model?

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2024

The year of production

(FOR SOME)

How do I prioritize my projects?

How can I lower my costs?

How do I make this real?

What customization method should I use?

How I can I scale this?

Which models should I use?

Should I train my own model?

How do I manage risks?

How can we move faster?

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Move quickly and generate value

- **Your data is the key** to maximizing the potential of generative AI
- **Identify use cases** that are relevant, viable, and impactful
- Empower your entire workforce, **regardless of their AI expertise**

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Customize generative AI for your business

- **Customization is key** to delivering differentiated experiences
- From models to tools, **choice** enables long-term flexibility and agility
- **Security and privacy** must be built in from day one
- Ensure your data is **readily accessible and ready for AI**

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Make the leap from experiments to scale

- Measure and track the **business value and ROI** as you scale
- Optimize for your **cost, latency, and accuracy** needs
- **Manage risk, maintain trust, and build responsibly** with strong compliance and governance
- Use services designed to enable innovation and **designed to scale**

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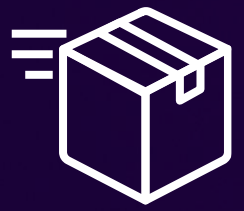
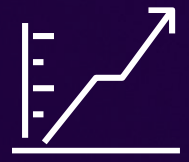
Why AWS for generative AI-powered retail and consumer goods?

Deliver hyper-personalized customer experiences



Accelerate product development and time to market



Improve employee productivity

Increase IT effectiveness

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How Nykaa automates product descriptions with machine learning and generative AI

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Agenda

01 About Nykaa

02 Nykaa tech muscle

03 Catalogue enrichment – collaboration with AWS

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NYKAA

Nykaa: India's preferred lifestyle retailer

NYKAA IS ONE OF INDIA'S LEADING BEAUTY AND FASHION OMNICHANNEL PLAYERS

51,438M
INR FY23 revenue
[9MFY24—Rs. 47,176M]

125M
FY23
monthly visits

6200+
Brands

16M+
Social
followers

175
Retail
stores

42M
FY23
orders

~30M
Customer
base

129M+
App
installs

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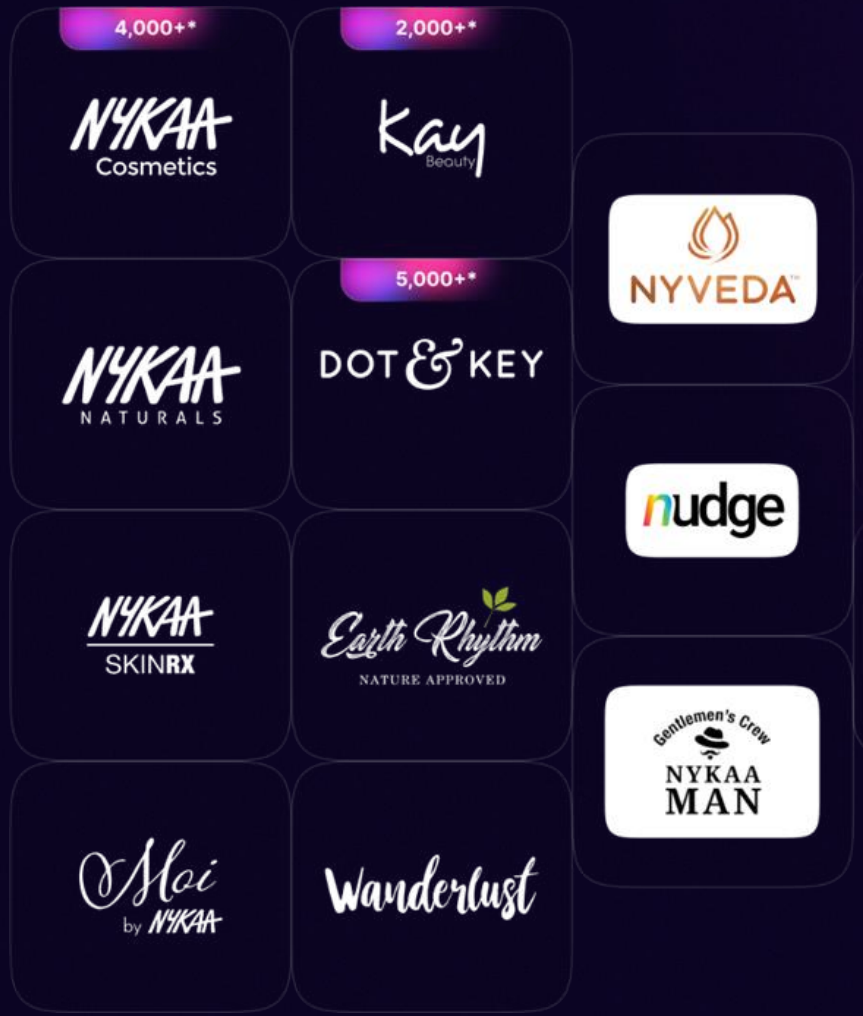
27 owned brands

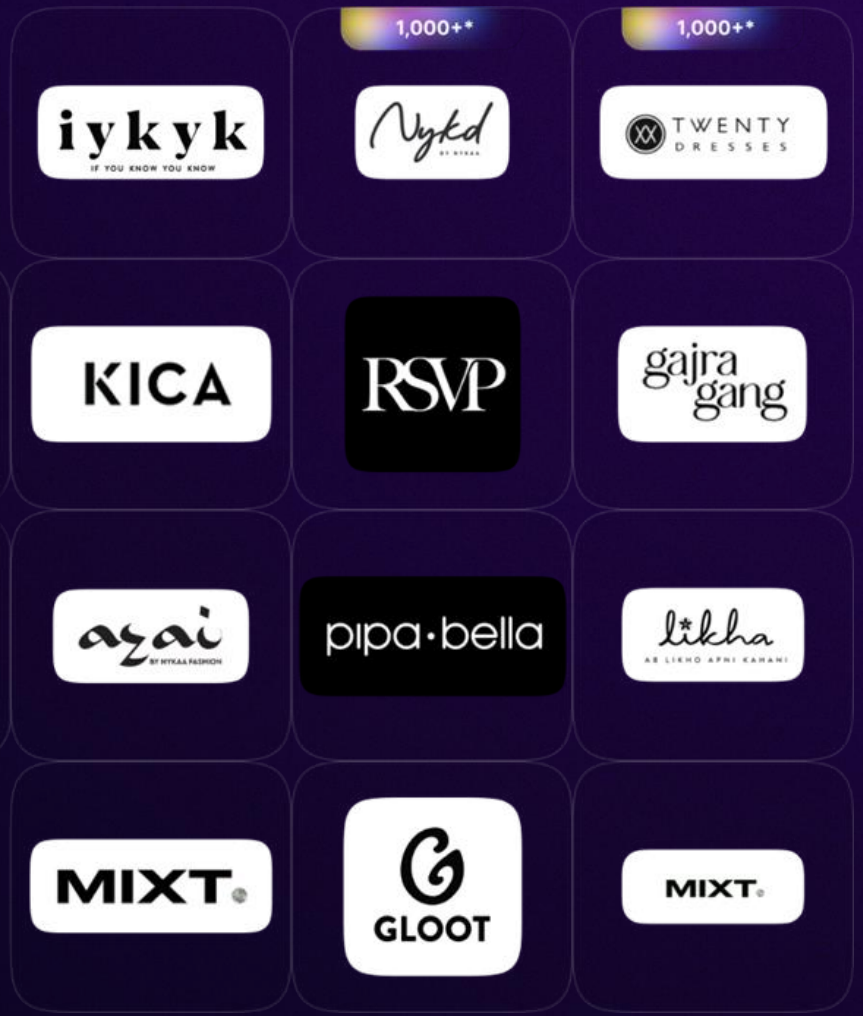
13 **BPC** Brands



27

Owned Brands

14 **Fashion** Owned Brands



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Nykaa technology

DRIVING SUPERIOR EXPERIENCES FOR OUR CUSTOMERS AND PARTNERS

Customers
Provide delightful, trustworthy experiences at every customer touchpoint

Partner brands
Drive outcomes for brands, advertisers and sellers through easy-to-use systems

Nykaa technology
powering Nykaa's omnichannel experiences through AI

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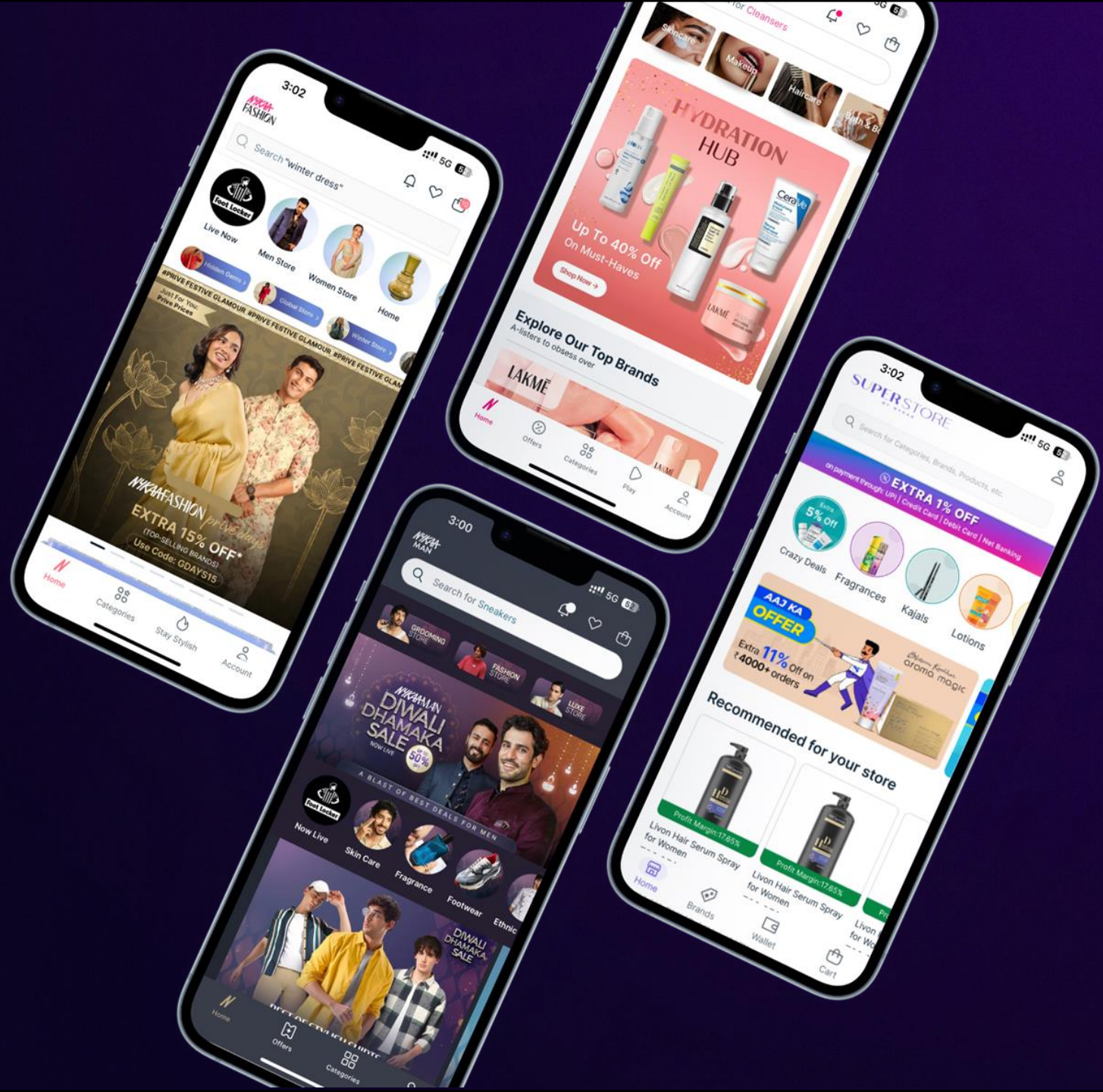
Enabling the best customer experience with vertical journeys

With a mission to help consumers step into the spotlight of their own lives, we focus on **content, curation** & **convenience** to bring customer delight, every step of the way.



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Inaccurate and incomplete product descriptions

The catalog team receives product images, descriptions, and attributes from vendors

Former process

Team manually validates and adds attributes based on Nykaa's ecosystem standards

Key gaps encountered

Manual validation process

Time-consuming and labor-intensive

Human reliance

Reliance on human judgment and risk of inconsistency

Limited scalability and error-prone

Attribute identification and description generation

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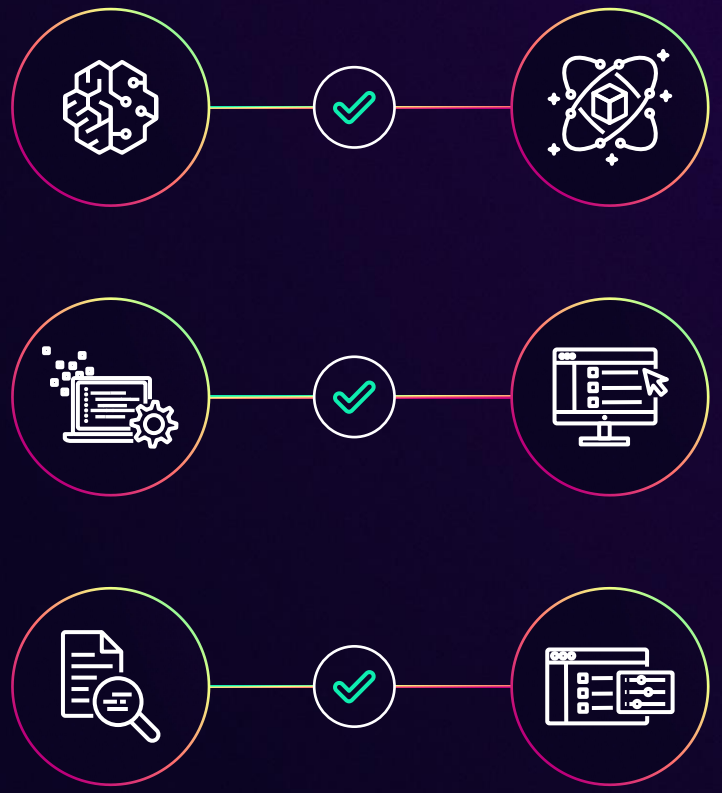
Leveraging generative AI and ML

AI base solution

Deep learning-based models to automatically identify correct product attributes from images

Utilize LLMs to generate product descriptions – eliminate manual process

Additional contextual product tags to enhance searchability and user experience



Benefits

Automated catalog management process
Improved efficiency and reduce errors

Enhance product discoverability for consumers
Improved user experience

Scalable and automated catalog management solutions
Foundation-built

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Automated product attribute identification

Opportunity

Objective:
Identify all additional product attributes needed for listing

Inputs:
Product images, available attributes, product name, category, size

Method:
Analyze product images and available attributes

Output:
Labels of product attributes (as required in category)

ATTRIBUTE PREDICTION

Attribute prediction

- **Pattern: Solid**
- **Occasion: Work**
- **Sleeve Length: Short**
- **Neckline: V-Neck**
- **Color: Olive**

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Automated product description generation

Opportunity

Objective:
Write compelling product descriptions

Inputs:
Product attributes, product name, product image (optional), category

Method:
Utilize product attributes and image information

Output:
Engaging product description that helps a customer make a purchase decision

PRODUCT DESCRIPTION

Description generation

Blue and white floral dress with a v-neckline and long sleeves. The dress is fitted at the waist with a flared skirt. The dress is made of a lightweight, flowy fabric and is perfect for a summer day.

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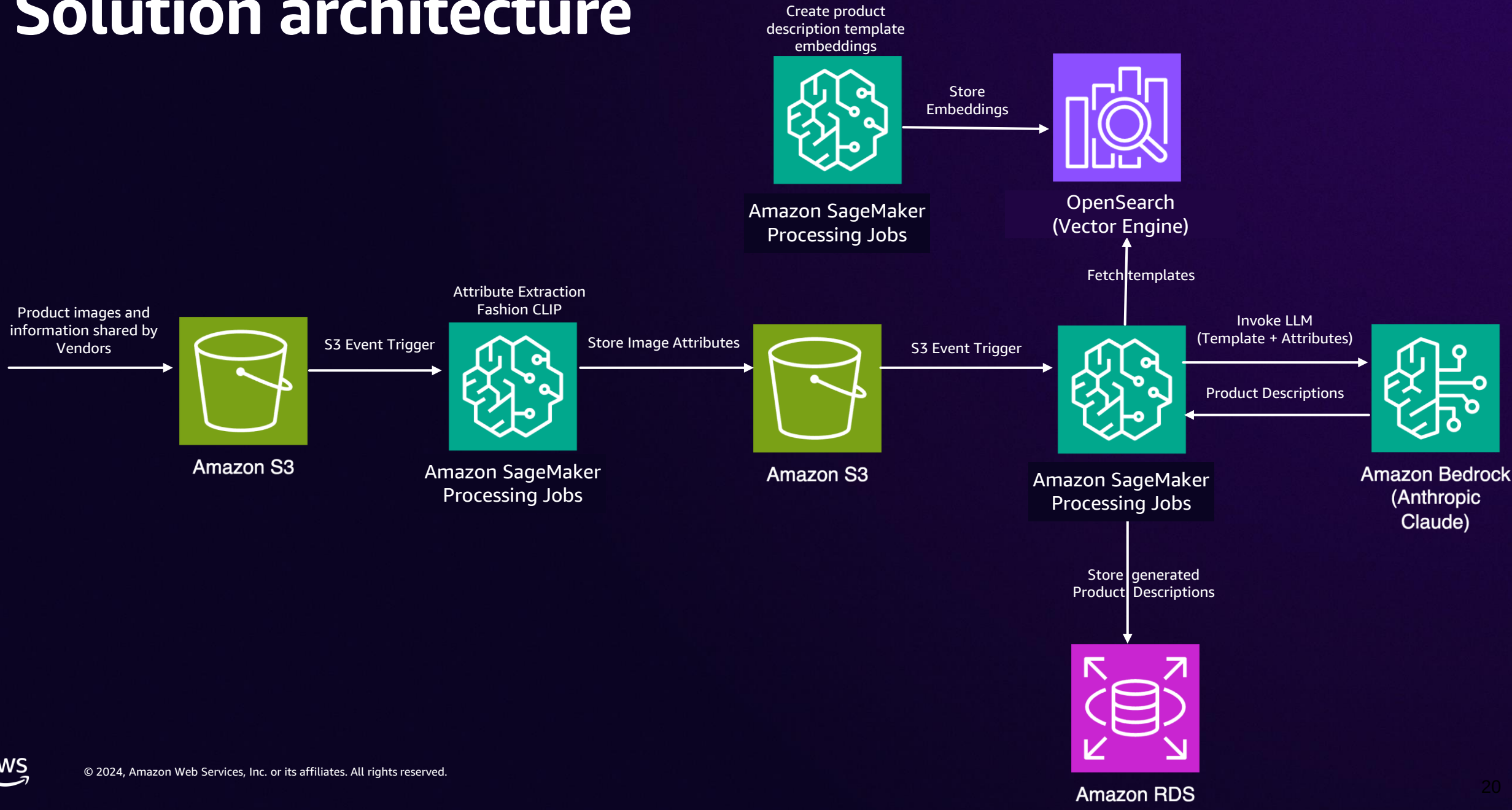
Solution architecture



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Leveraging Amazon’s expertise

Collaboration model

Nykaa ML Team

Trained models on 1M+ SKUs overall; identified and addressed gaps in product descriptions

Improved catalogue enrichment processes

Amazon (Retail) India

Expert guidance on the blueprint and foundation of Nykaa's AI-powered catalogue enrichment

AWS (Amazon Web Services)

Consultation on usage of gen AI and ML tools

Liaison with Amazon (Retail) India team for expertise

Assisted in building pipelines on SageMaker and utilizing CLIP models

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Successful collaboration

Strong accuracy

90% accuracy across multiple attributes based on annotated data

Scalable solution architecture

Solution pipelines built so new attribute models can be built with minimal guidance

Empowering PMs to self-serve

Robust metrics instrumentation (WIP)

Establish data quality metrics for measuring impact

Monitor model drift parameters

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