

MICHIGAN STATE

U N I V E R S I T Y

Project Plan

Maestro

The Capstone Experience

Team Amazon

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*From Students...
...to Professionals*

Functional Specifications

- Reducing inaccurate product descriptions on Amazon.com
- Collecting descriptions from alternative sources
- Compare various descriptions to Amazon's description
- Flag inaccurate descriptions to allow Amazon employee to make updates



Design Specifications

- New listings can be reviewed before publishing
- Current listings are reviewed and flagged if necessary
- Flagged products are reviewed by Amazon employee and inaccuracies are highlighted
- Changes are approved by employee
- Any changes are reflected in the final product description on the retail site



Screen Mockup: Employee Dashboard

The screenshot displays a web browser window with the URL <https://www.amazon-enhancingproductdescriptions.com>. The Amazon logo is in the top left, and a 'Reviewed' progress bar is below it. The main heading is 'Product Error Dashboard' with a 'Product Specifications' dropdown menu to its right.

Three product listings are shown, each with a missing attribute button:

- Lozeguyc iPhone XR Credit Case | 6.1 inch| Gray**
 - Rating: ★★★★★
 - Compatible Phone Models : iPhone XR 6.1 Inch
 - Material Type : Faux Leather
 - Package Dimensions : 6.02 x 3.19 x 0.71 inches
 - Item Weight : 1.09 ounces
 - Button: [View Missing Attributes](#)
- Adidas 2018-2019 Real Madrid Football T-Shirt**
 - Rating: ★★★★★
 - Package Dimensions : 11.81 x 7.87 x 0.79 inches; 1.1
 - Size : XS - 34-36" Chest Size
 - Not Recommended to Wash Above 30 Degrees
 - Department : Mens
 - Button: [View Incorrect Product Description + Missing Attributes](#)
- Sun's Tea | Set of 2 | 16 oz/45 ml**
 - Rating: ★★★★★
 - Manufacturer: Sunvalley Enterprises LLC
 - Package Dimensions : 15.8 x 11.4 x 5.4 inches
 - Item Weight : 2.16 pounds
 - Button: [View Missing Attributes](#)




Screen Mockup: Review Product

https://www.amazon-enhancingproduct-descriptions.com

amazon Retail Customer | Amazon Employee

Adidas Real Madrid T-Shirt

View Customer reviews ▾



PRODUCT DESCRIPTION

Brand new, official Real Madrid Adizero Authentic Home Shirt for the 2018 2019 La Liga season. This authentic football kit is available in adult sizes S, M, L, XL, XXL, XXXL and is manufactured by Adidas. For the first time in 10 years the Real shirt has **a purely white and black design**, giving the team a classic Blancos look with adidas signature twist in the three-stripe shoulder detailing, sleeve trim and **single button** collar. The technical construction of the kit uses **Climachill fabric**, developed for cool performance in the hottest weather.

MISSING SPECIFICATIONS

- FABRIC_TYPE : Climalite fabric
- POCKET_DESCRIPTION : None
- MATERIAL : Polyester DoubleKnit

Suggested Update

Wrong Description	Correct Description
<input type="checkbox"/> A purely white and black design : A few shades darker than the club's traditional white	
<input type="checkbox"/> Single button Collar : Ribbed henley collar.	
<input type="checkbox"/> Climachill Fabric : Lightweight fabric with a sweat-wicking Climate fabric	

Additional Product Description to be added:

- Regular fit is a slightly looser cut than what players wear on the field is wider in the shoulders and body

Check ONLY those boxes you want to be updated

Close Save Changes

UPDATE



Screen Mockup: Seller Dashboard

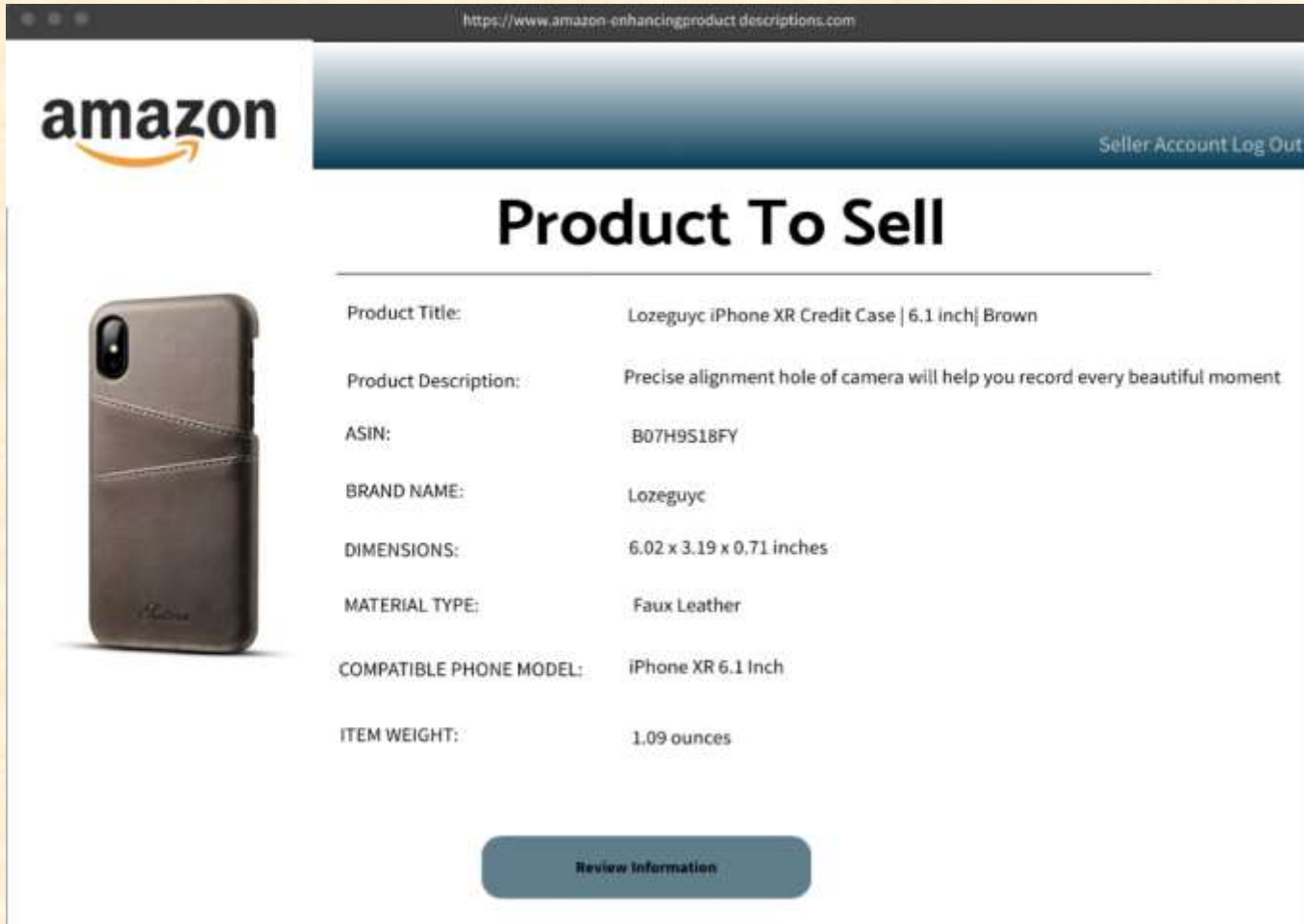
The screenshot displays the Amazon Seller Dashboard interface. At the top, the Amazon logo is on the left, and a search bar with a magnifying glass icon is on the right. Below the search bar, there are links for "Retail Customer" and "Amazon Employee". The main heading is "Available Products", with a "Product Descriptions" dropdown menu to its right. Three product listings are shown in a grid:

- Adidas 2018-2019 Real Madrid Football T-Shirt**: A white t-shirt with "Fly Emirates" and the Real Madrid crest. Price: \$63.18 - \$70.00. Rating: 5 stars.
- Lozquyc iPhone XR Credit Case | 6.1 inch | Gray**: A dark gray leather-textured phone case. Price: \$29.99. Rating: 5 stars.
- Sun's Tea | Set of 2**: Two glasses of 16 oz / 450 ml tea, one red and one green. Price: \$22.99. Rating: 5 stars.

Below the product listings, there is a "View Customer Reviews" button.



Screen Mockup: New Seller Listing



The screenshot shows a web browser window with the URL <https://www.amazon-enhancingproduct-descriptions.com>. The Amazon logo is in the top left, and 'Seller Account Log Out' is in the top right. The main heading is 'Product To Sell'. On the left is a product image of a brown, textured iPhone XR credit case. To the right is a list of product details:

Product Title:	Lozeguyc iPhone XR Credit Case 6.1 inch Brown
Product Description:	Precise alignment hole of camera will help you record every beautiful moment
ASIN:	B07H9S18FY
BRAND NAME:	Lozeguyc
DIMENSIONS:	6.02 x 3.19 x 0.71 inches
MATERIAL TYPE:	Faux Leather
COMPATIBLE PHONE MODEL:	iPhone XR 6.1 Inch
ITEM WEIGHT:	1.09 ounces

At the bottom center is a dark blue button labeled 'Review Information'.

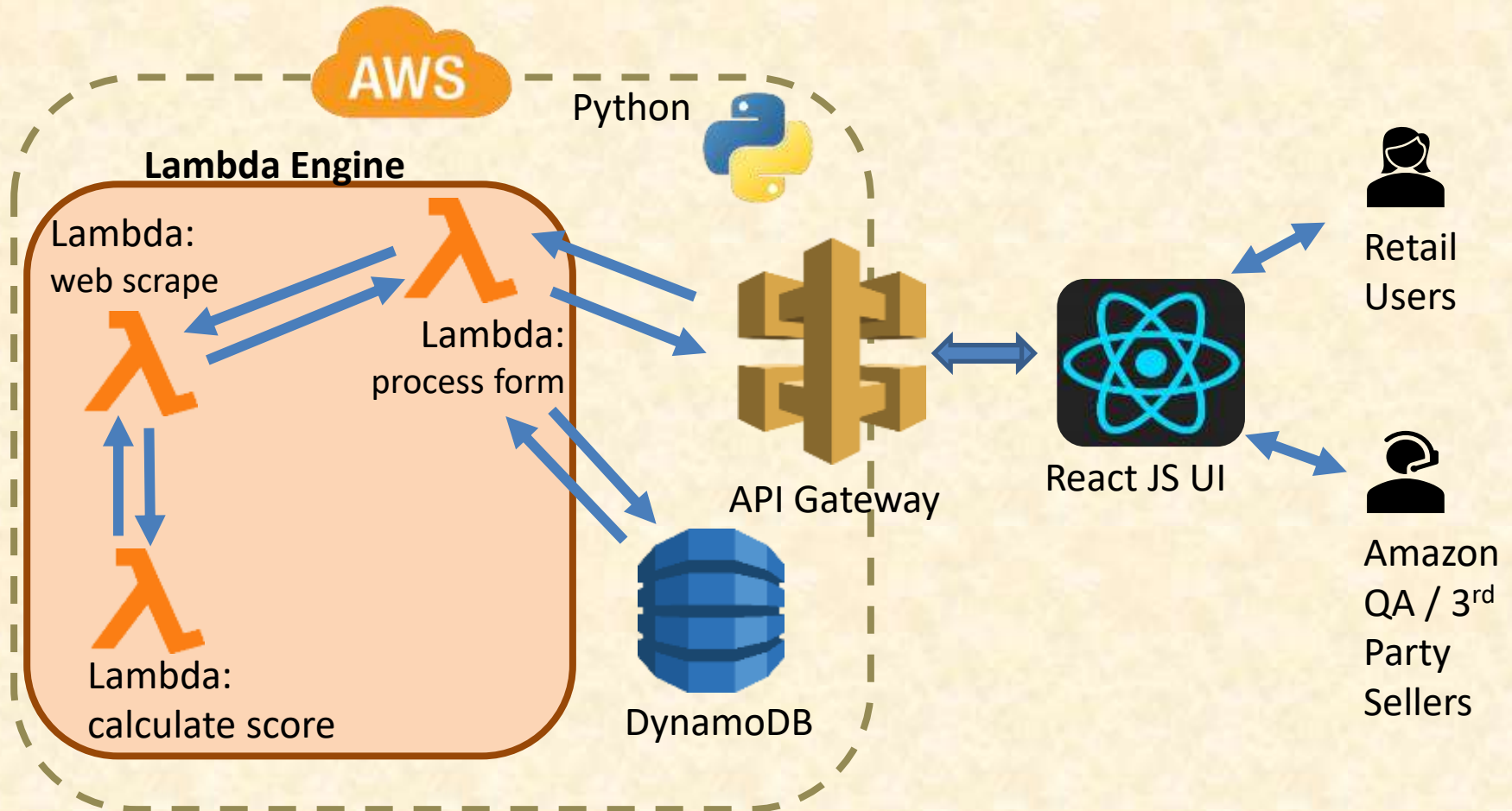


Technical Specifications

- AWS DynamoDB to store data from Amazon and natively
- AWS API Gateway to handle interaction between front and back end
- AWS Lambda to perform web scraping, Natural Language Processing (NLP), and saving to database
- React JS handle front end user interface (UI)



System Architecture



System Components

- Software Platforms / Technologies
 - Amazon Web Services
 - Lambda
 - Gateway
 - DynamoDB
 - SageMaker
 - React JS
 - Python Packages
 - BeautifulSoup
 - GoogleSearch



Risks

- Ensuring Comparison of Identical Products
 - Lack of a universal product identifier among retailers requires alternative methods to guarantee product matching
 - Use NLP text similarity technologies to verify product matching
- Delivering Accurate Metrics from Product Comparator Algorithm
 - Multiple variables can cause NLP model to fail in delivering accurate output
 - Consult with NLP experts at MSU and Amazon to line out efficient models
- Generalizing Algorithm to Work Across Product Categories and Sources
 - NLP model needs to generalize well to different product lines
 - Start development with single product type and generalize outward



Questions?

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