

Architecture Diagrams

DescribeForMe Web App



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DescribeForMe Web App Architecture Diagrams

DescribeForMe Web App: Architecture Diagrams

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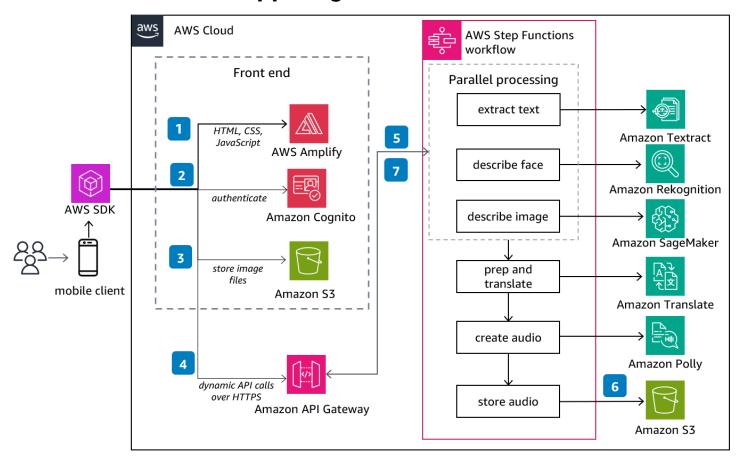
DescribeForMe Web App Architecture Diagrams

DescribeForMe Web App

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The <u>DescribeForMe</u> web app uses the AWS Cloud to help the visually impaired review images. Through the use of multiple artificial intelligence and machine learning (AI/ML) services, you can submit a photo and an image caption will be read back to you in a clear, natural-sounding voice in a variety of languages and dialects.

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- 1. **AWS Amplify** distributes the DescribeForMe web app, consisting of HTML, JavaScript, and CSS, to your mobile device.
- 2. The **Amazon Cognito** identity pool grants temporary access to the **Amazon Simple Storage Service** (Amazon S3) bucket.
- 3. The user uploads an image file to the **Amazon S3** bucket using an AWS SDK through the web app.

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4. The DescribeForMe web app invokes the backend AI services by sending the **Amazon S3** object key in the payload to **Amazon API Gateway**.

- 5. **API Gateway** instantiates an **AWS Step Functions** workflow. The state machine orchestrates the AI/ML services **Amazon Rekognition**, **Amazon SageMaker AI**, **Amazon Textract**, **Amazon Translate**, and **Amazon Polly** using **AWS Lambda** functions.
- 6. The **Step Functions** workflow creates an audio file as output and stores it in **Amazon S3** in MP3 format.
- 7. A pre-signed URL with the location of the audio file stored in **Amazon S3** is sent back to your browser through **Amazon API Gateway**. Your mobile device plays the audio file using the presigned URL.

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Further reading

For additional information, refer to

- AWS Architecture Icons
- AWS Architecture Center
- AWS Well-Architected
- DescribeForMe

Contributors

Contributors to this reference architecture diagram include:

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Diagram history

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Diagram history