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Vellore Institute of Technology

(Deemed to be University under section 3 of UGC Act, 1956)

SCOPE

FALL SEMESTER 2025-2026

LAB ASSESSMENT -2

Slot: L13+L14

Class: VL2025260105679

Programme Name & Branch: B. Tech CSBS

Course code & Title: CBS3005- CLOUD, MICROSERVICES AND APPLICATIONS LAB BASED COMPONENTS

Faculty Name: NITHYA K

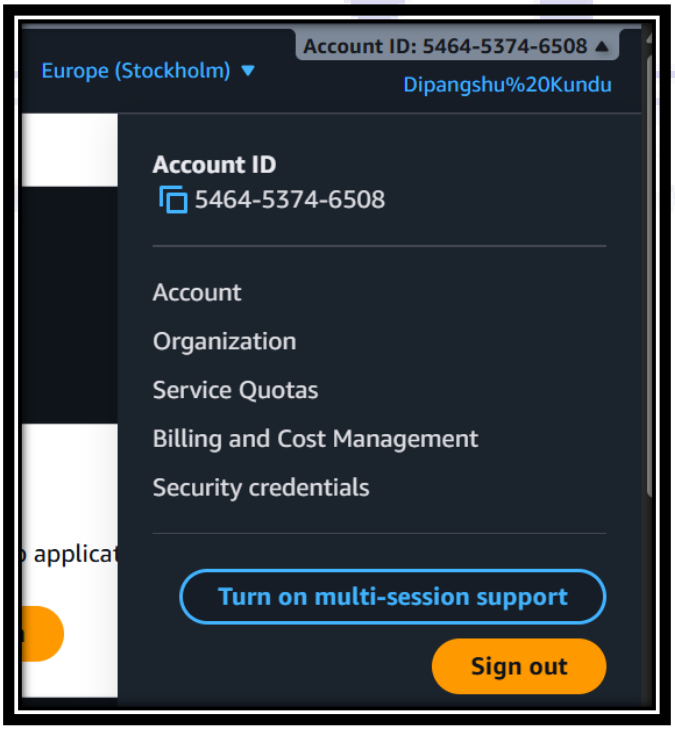
SUBMITTED BY: -DIPANGSHU KUNDU

REGISTRATION NUMBER: - 22BBS0148

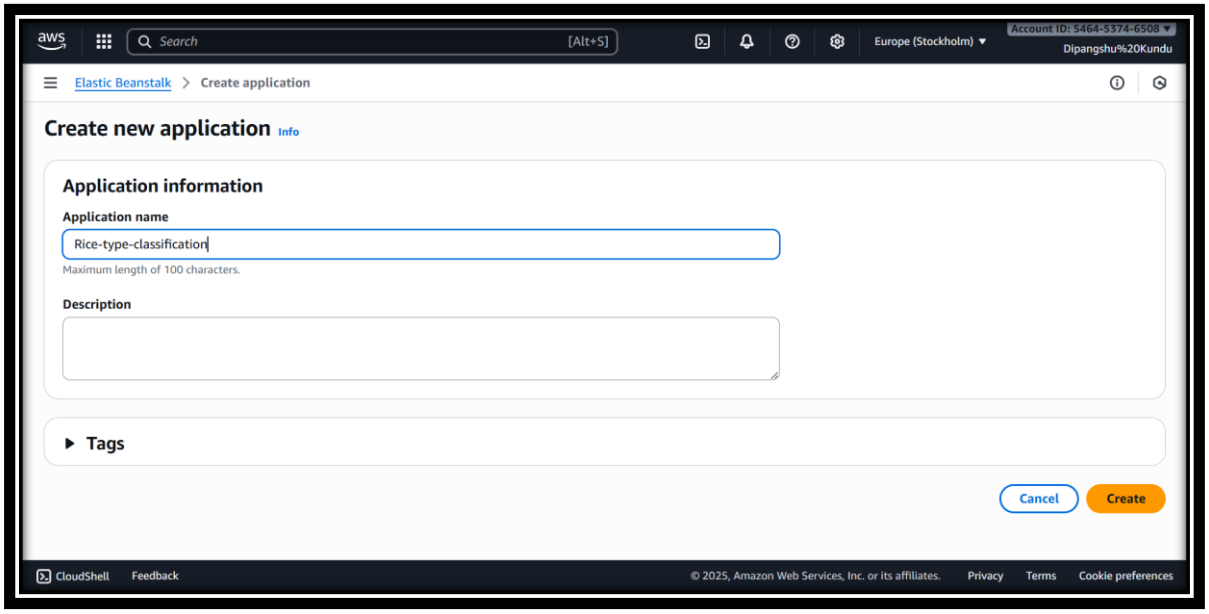
QUESTION:

(i) Create a simple web application using your preferred programming language and framework (e.g., Node.js, Python, Java etc.). Ensure the application is fully functional and ready for deployment. Initialize an AWS Elastic Beanstalk environment for your application. Choose the appropriate platform (e.g., Node.js, Python, Java) and configure the environment settings. Package your web application and deploy it to the Elastic Beanstalk environment. Access the deployed web application via the Elastic Beanstalk URL provided. Test its functionality to confirm that the deployment was successful and that the application is accessible and performs as expected.

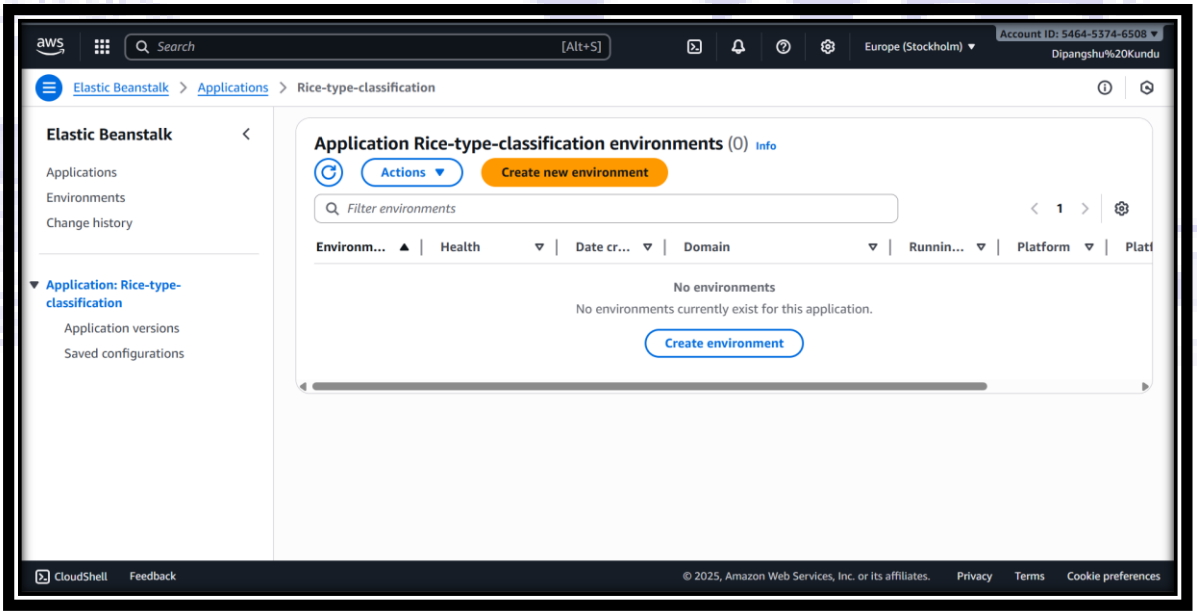
SOLUTION: -

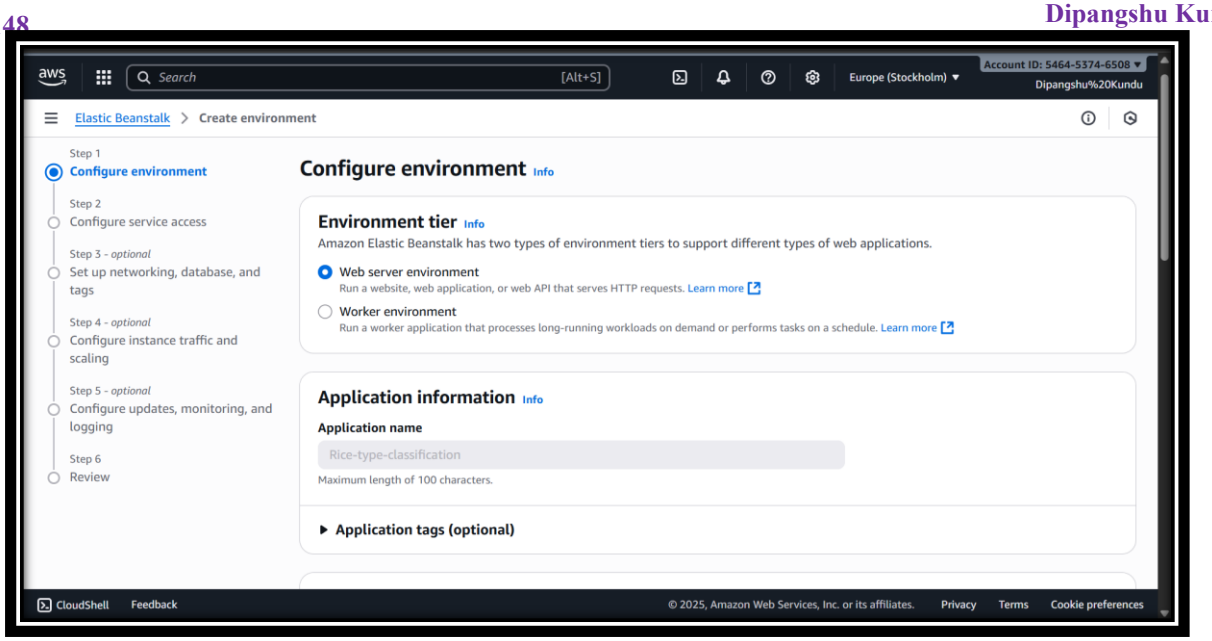


CREATING A NEW APPLICATION



CREATING AND CONFIGURING AN ENVIRONMENT




Search [Alt+S]
Europe (Stockholm)
Account ID: 5464-5374-6508
Dipangshu%20Kundu
Elastic Beanstalk > Create environment
Step 1
Configure environment
Step 2
Configure service access
Step 3 - optional
Set up networking, database, and tags
Step 4 - optional
Configure instance traffic and scaling
Step 5 - optional
Configure updates, monitoring, and logging
Step 6
Review
Configure environment Info
Environment tier Info
Amazon Elastic Beanstalk has two types of environment tiers to support different types of web applications.
Web server environment
Run a website, web application, or web API that serves HTTP requests. Learn more
Worker environment
Run a worker application that processes long-running workloads on demand or performs tasks on a schedule. Learn more
Application information Info
Application name
Rice-type-classification
Maximum length of 100 characters.
Application tags (optional)
CloudShell Feedback
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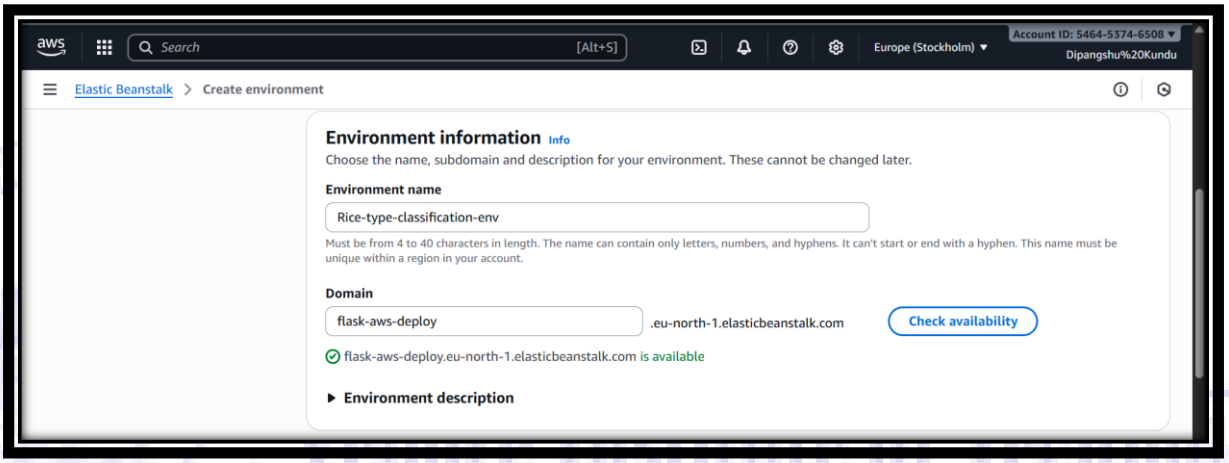
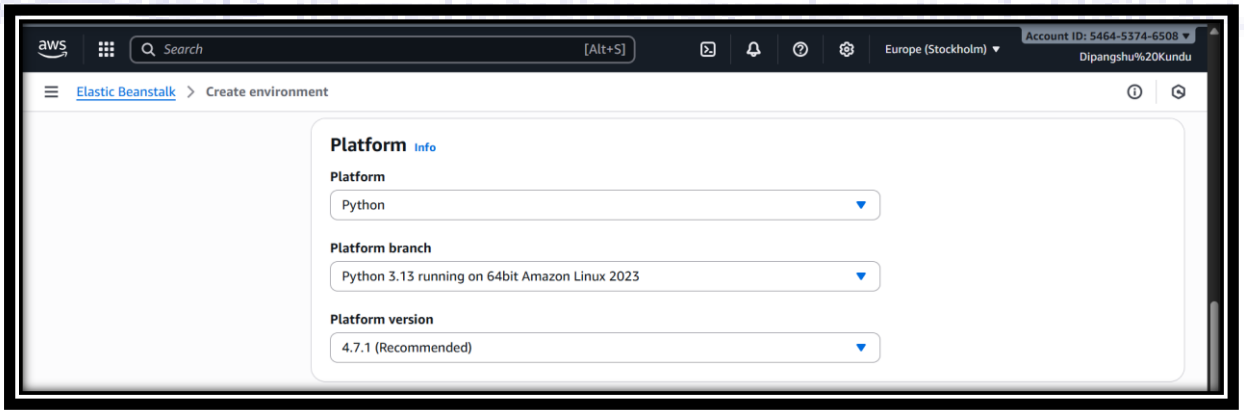
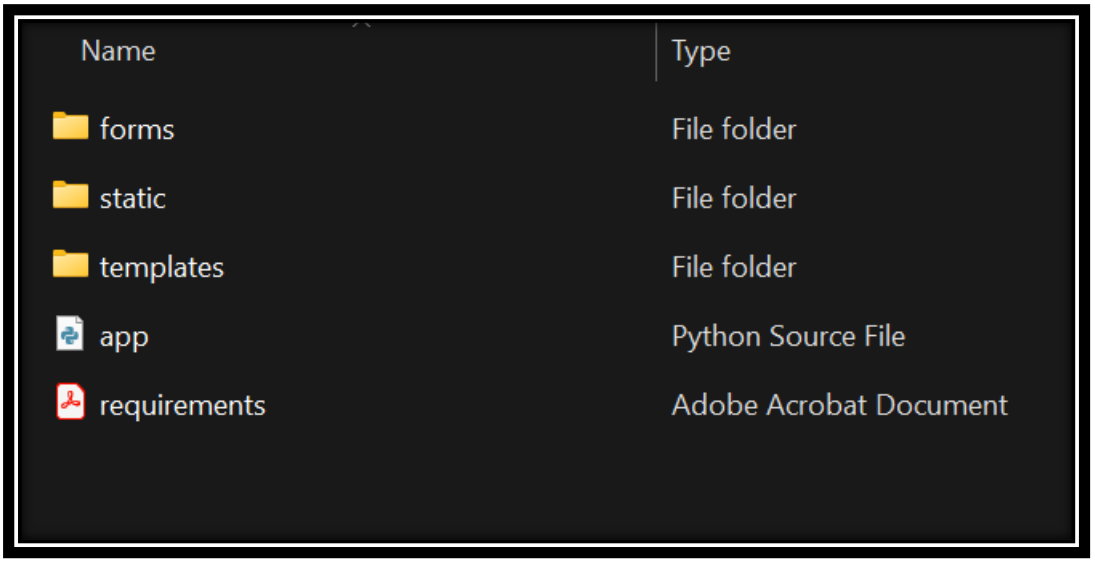
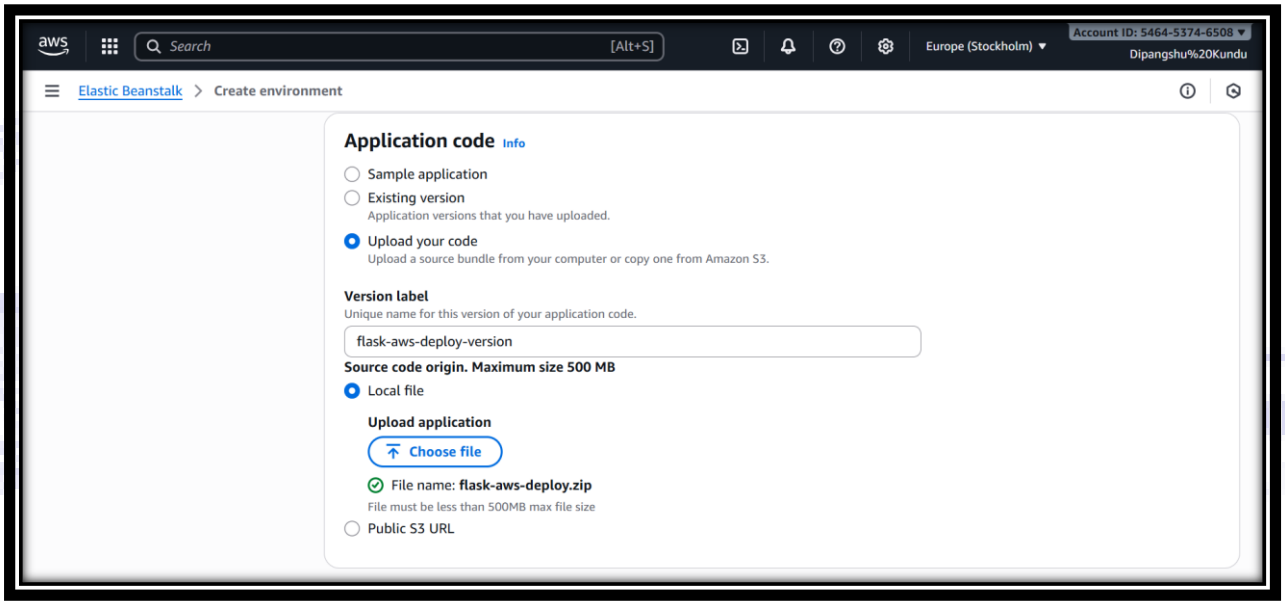

Search [Alt+S]
Europe (Stockholm)
Account ID: 5464-5374-6508
Dipangshu%20Kundu
Elastic Beanstalk > Create environment
Environment information Info
Choose the name, subdomain and description for your environment. These cannot be changed later.
Environment name
Rice-type-classification-env
Must be from 4 to 40 characters in length. The name can contain only letters, numbers, and hyphens. It can't start or end with a hyphen. This name must be unique within a region in your account.
Domain
flask-aws-deploy
.eu-north-1.elasticbeanstalk.com
Check availability
flask-aws-deploy.eu-north-1.elasticbeanstalk.com is available
Environment description

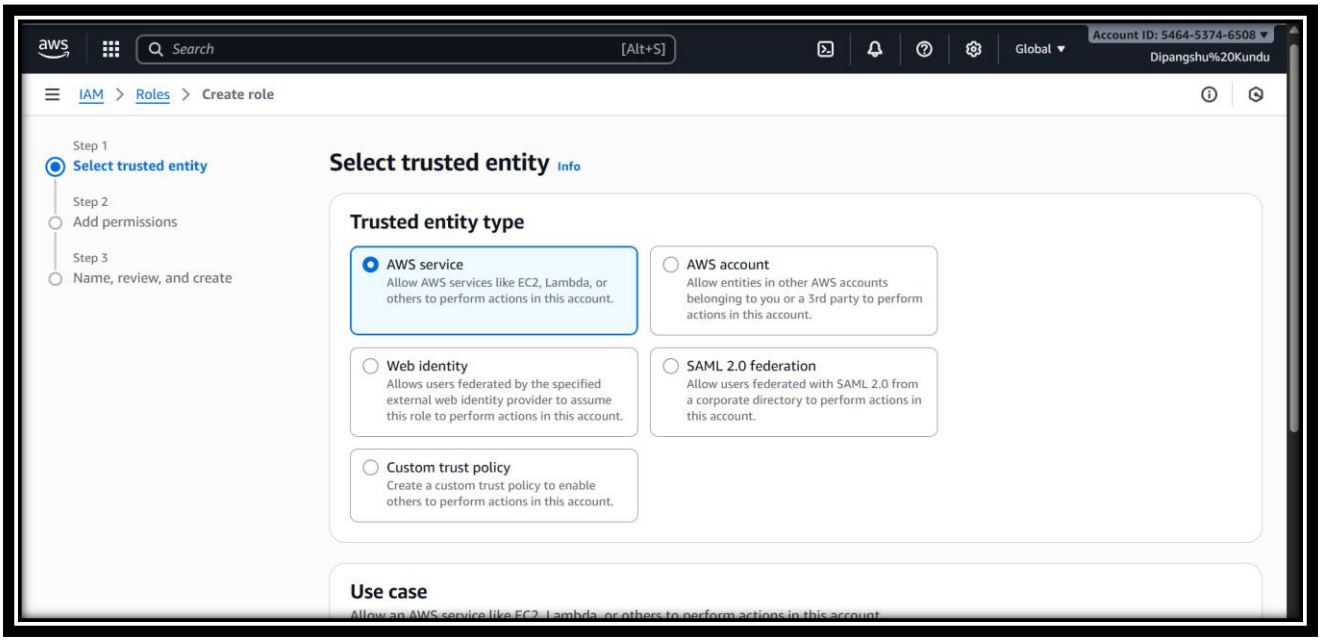

Search [Alt+S]
Europe (Stockholm)
Account ID: 5464-5374-6508
Dipangshu%20Kundu
Elastic Beanstalk > Create environment
Platform Info
Platform
Python
Platform branch
Python 3.13 running on 64bit Amazon Linux 2023
Platform version
4.7.1 (Recommended)

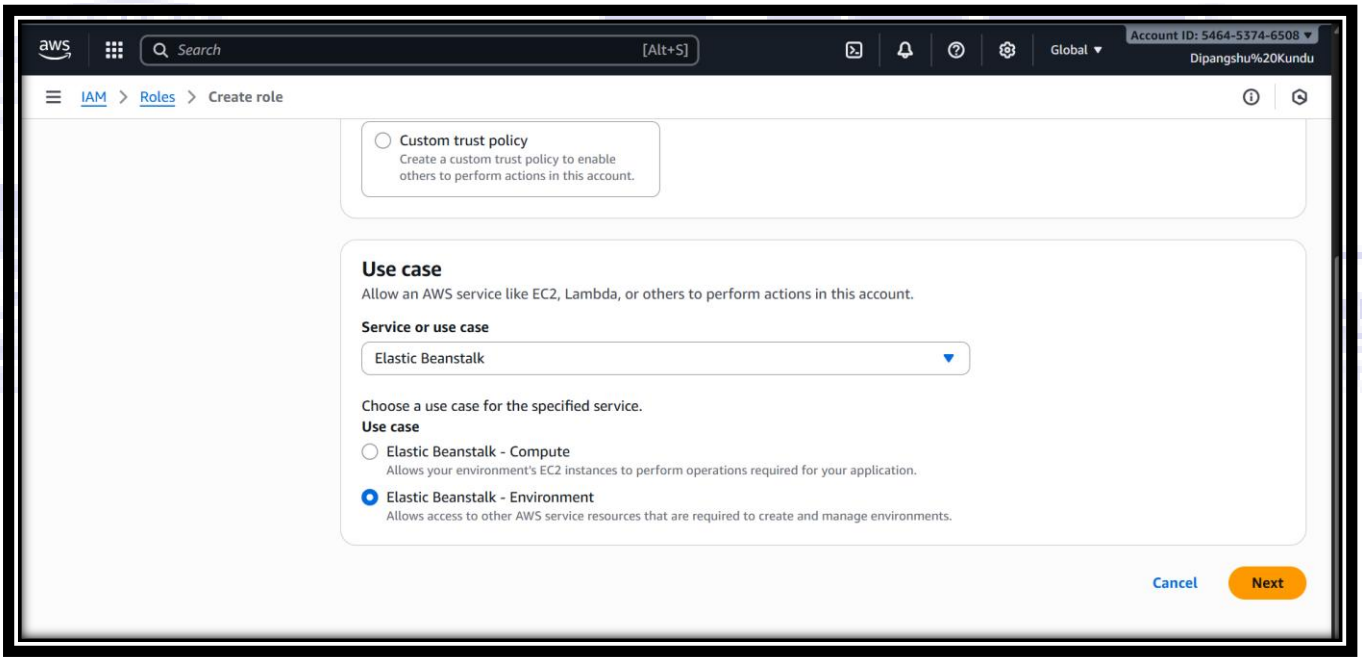
STRUCTURE OF FOLDER AND UPLOADING THE ZIP FILE

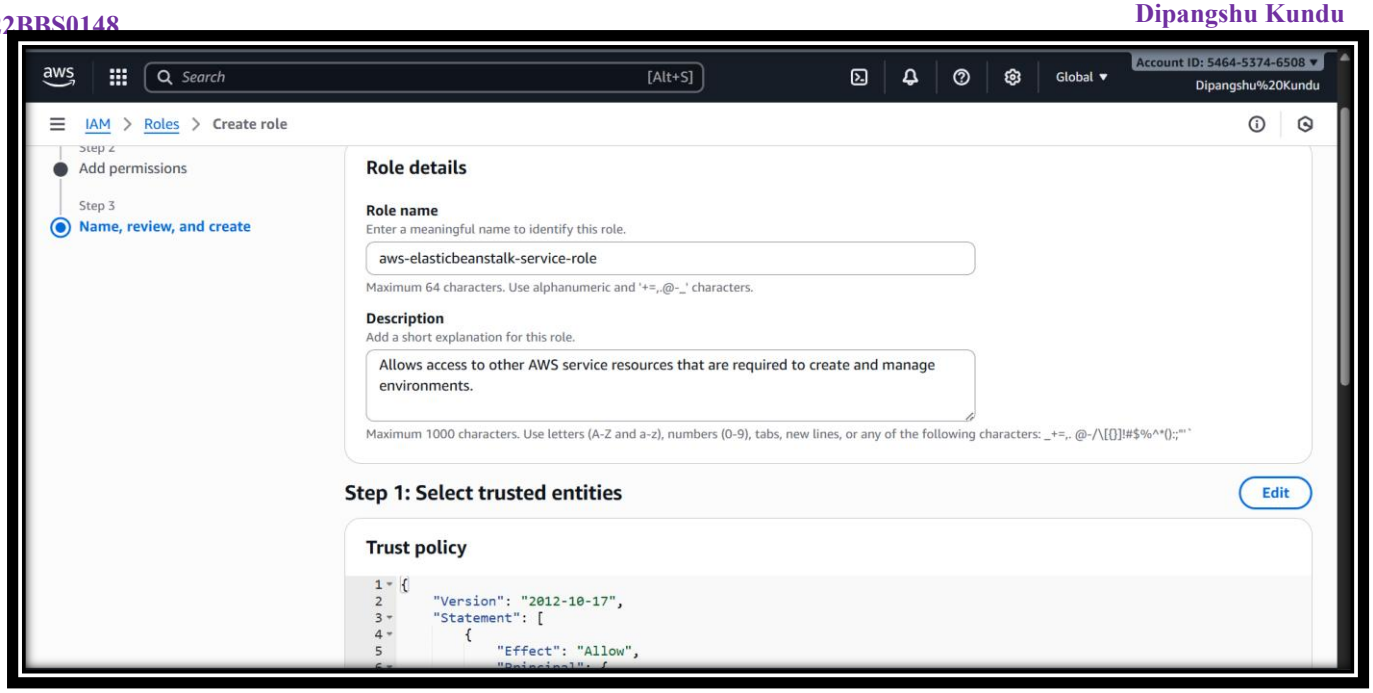


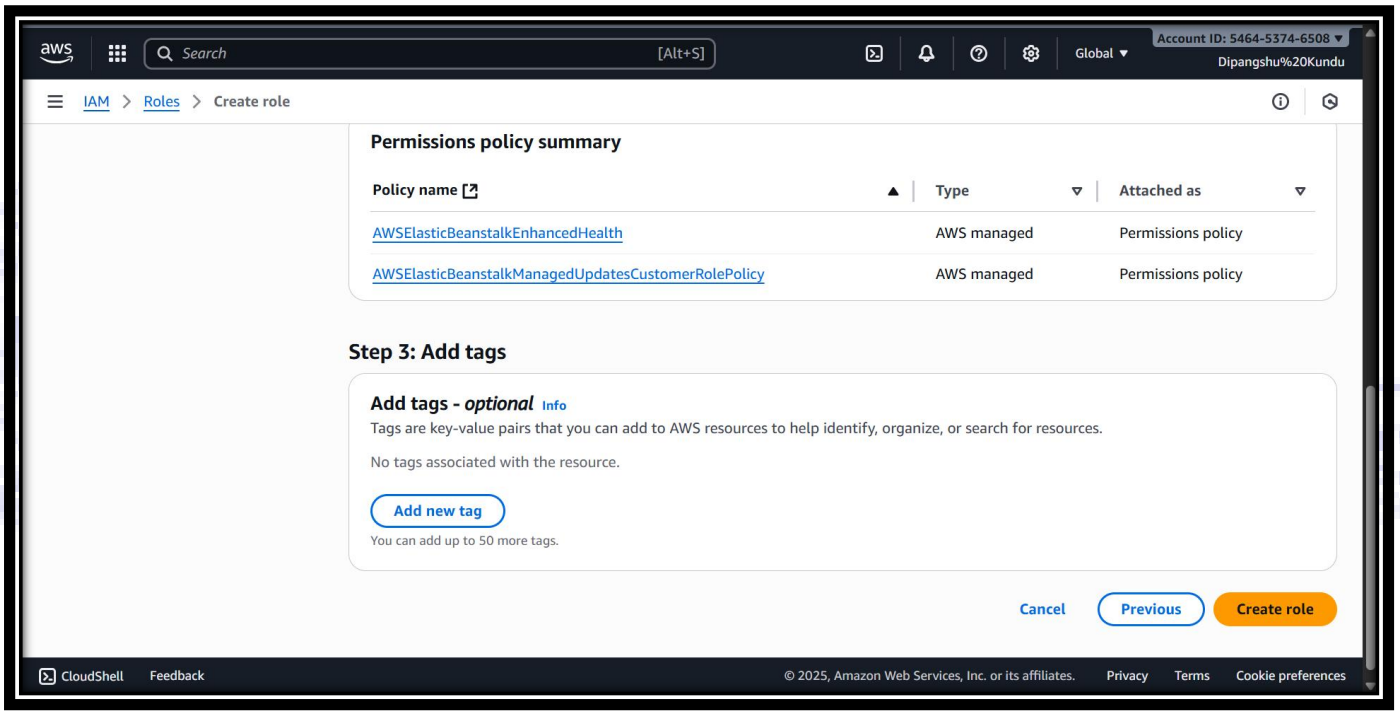


CREATING THE SPECIFIC ROLES REQUIRED






aws
Search
[Alt+S]
Global
Account ID: 5464-5374-6508
Dipangshu%20Kundu
IAM > Roles > Create role
Step 2
Add permissions
Step 3
Name, review, and create
Role details
Role name
Enter a meaningful name to identify this role.
aws-elasticbeanstalk-service-role
Maximum 64 characters. Use alphanumeric and '+=,.@-_' characters.
Description
Add a short explanation for this role.
Allows access to other AWS service resources that are required to create and manage environments.
Maximum 1000 characters. Use letters (A-Z and a-z), numbers (0-9), tabs, new lines, or any of the following characters: _+=,. @-/\[{}]!#$%^*();"'`
Step 1: Select trusted entities
Edit
Trust policy
{
"Version": "2012-10-17",
"Statement": [
{
"Effect": "Allow",


aws
Search
[Alt+S]
Global
Account ID: 5464-5374-6508
Dipangshu%20Kundu
IAM > Roles > Create role
Permissions policy summary
Policy name
Type
Attached as
AWSElasticBeanstalkEnhancedHealth
AWS managed
Permissions policy
AWSElasticBeanstalkManagedUpdatesCustomerRolePolicy
AWS managed
Permissions policy
Step 3: Add tags
Add tags - optional Info
Tags are key-value pairs that you can add to AWS resources to help identify, organize, or search for resources.
No tags associated with the resource.
Add new tag
You can add up to 50 more tags.
Cancel
Previous
Create role
CloudShell
Feedback
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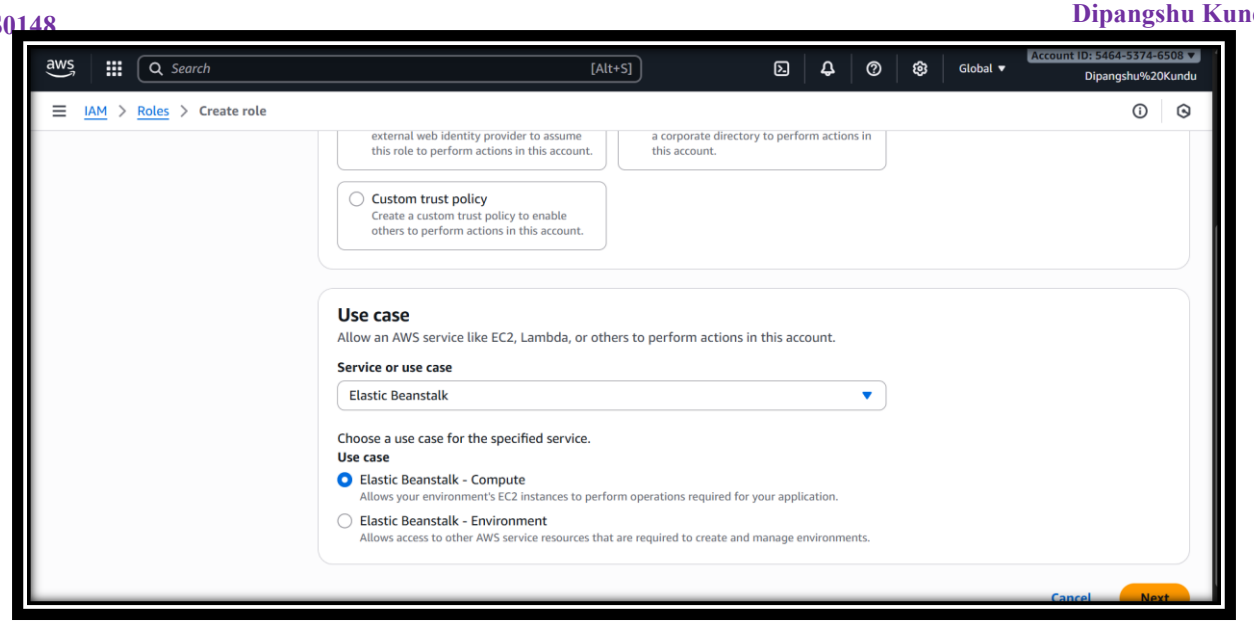
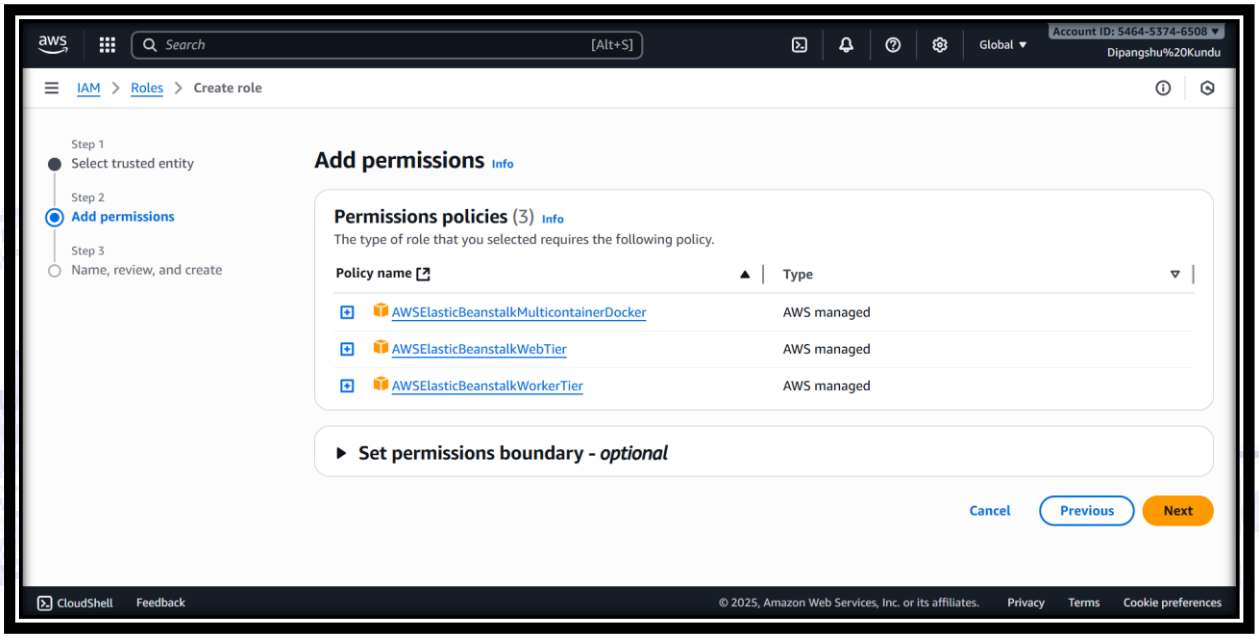

Search [Alt+S]
Global
Account ID: 5464-5374-6508
Dipangshu%20Kundu
IAM > Roles > Create role
external web identity provider to assume this role to perform actions in this account.
a corporate directory to perform actions in this account.
Custom trust policy
Create a custom trust policy to enable others to perform actions in this account.
Use case
Allow an AWS service like EC2, Lambda, or others to perform actions in this account.
Service or use case
Elastic Beanstalk
Choose a use case for the specified service.
Use case
Elastic Beanstalk - Compute
Allows your environment's EC2 instances to perform operations required for your application.
Elastic Beanstalk - Environment
Allows access to other AWS service resources that are required to create and manage environments.
Cancel
Next


Search [Alt+S]
Global
Account ID: 5464-5374-6508
Dipangshu%20Kundu
IAM > Roles > Create role
Step 1
Select trusted entity
Step 2
Add permissions
Step 3
Name, review, and create
Add permissions Info
Permissions policies (3) Info
The type of role that you selected requires the following policy.
Policy name
Type
AWSElasticBeanstalkMulticontainerDocker
AWS managed
AWSElasticBeanstalkWebTier
AWS managed
AWSElasticBeanstalkWorkerTier
AWS managed
Set permissions boundary - optional
Cancel
Previous
Next
CloudShell
Feedback
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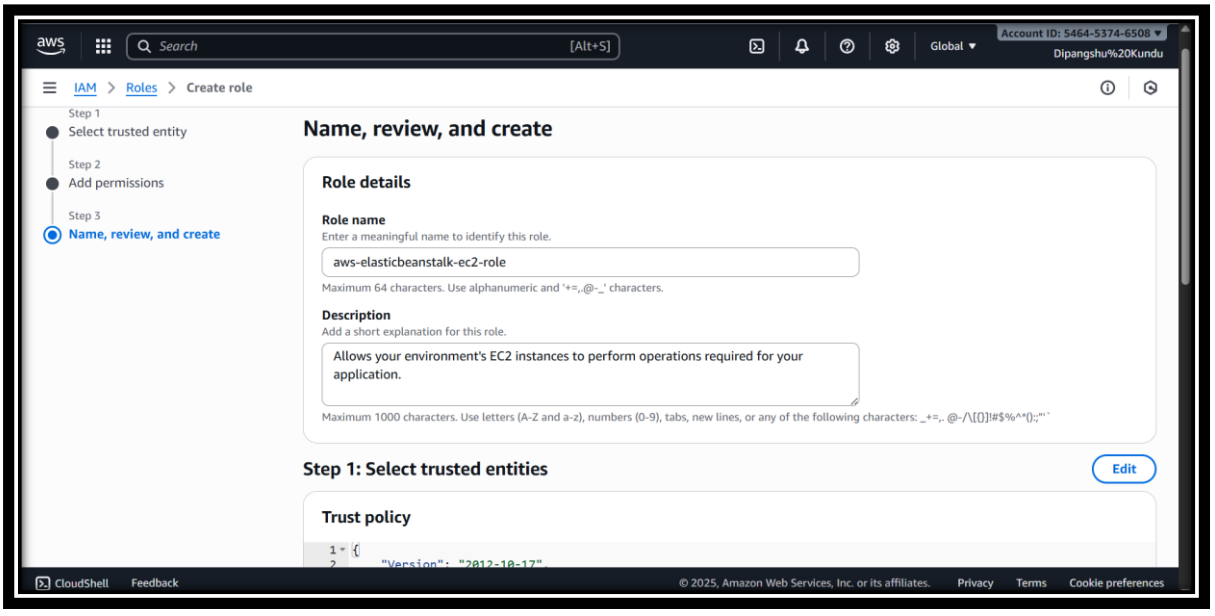
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Global
Account ID: 5464-5374-6508
Dipangshu%20Kundu
IAM > Roles > Create role
Step 1
Select trusted entity
Step 2
Add permissions
Step 3
Name, review, and create
Name, review, and create
Role details
Role name
Enter a meaningful name to identify this role.
aws-elasticbeanstalk-ec2-role
Maximum 64 characters. Use alphanumeric and '+=,.@-_' characters.
Description
Add a short explanation for this role.
Allows your environment's EC2 instances to perform operations required for your application.
Maximum 1000 characters. Use letters (A-Z and a-z), numbers (0-9), tabs, new lines, or any of the following characters: _+=,. @-/\[{}]!#$%^*();"'`
Step 1: Select trusted entities
Edit
Trust policy
1 {
"Version": "2012-10-17",
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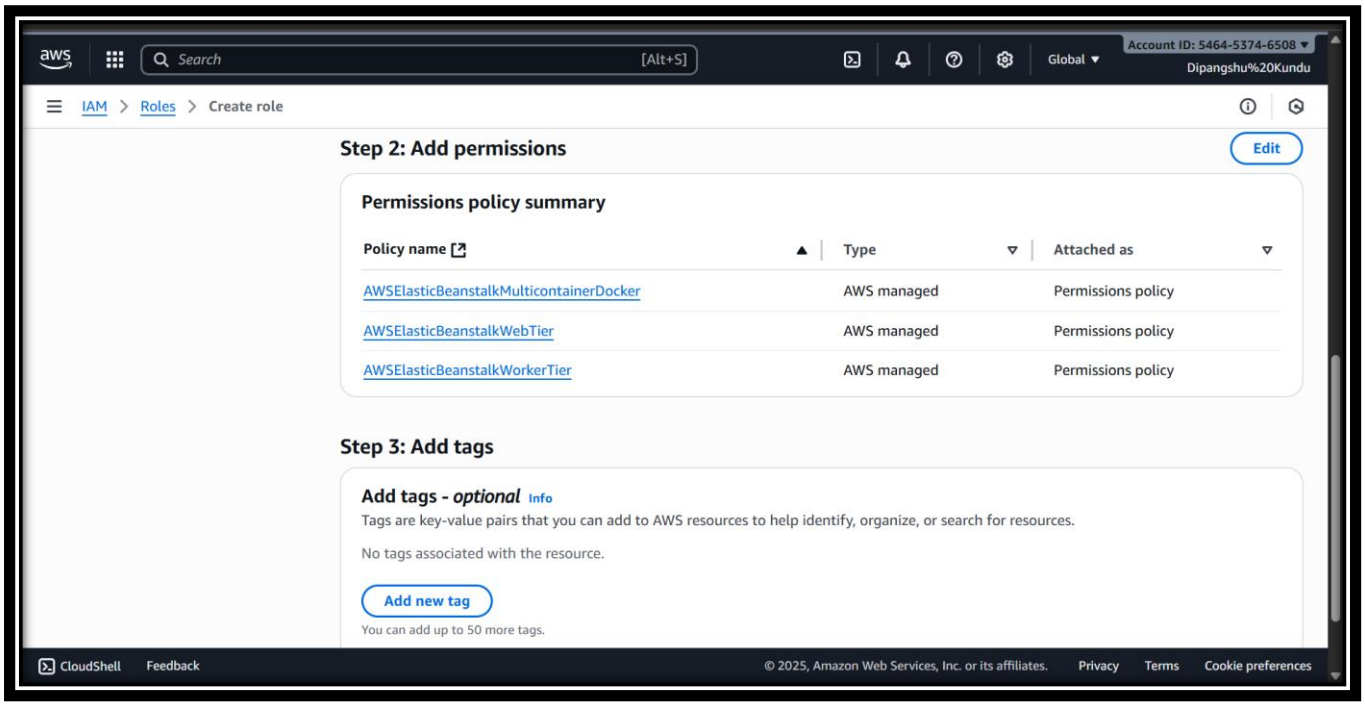
aws
Search
[Alt+S]
Global
Account ID: 5464-5374-6508
Dipangshu%20Kundu
IAM > Roles > Create role
Step 2: Add permissions
Edit
Permissions policy summary
Policy name
Type
Attached as
AWSElasticBeanstalkMulticontainerDocker
AWS managed
Permissions policy
AWSElasticBeanstalkWebTier
AWS managed
Permissions policy
AWSElasticBeanstalkWorkerTier
AWS managed
Permissions policy
Step 3: Add tags
Add tags - optional Info
Tags are key-value pairs that you can add to AWS resources to help identify, organize, or search for resources.
No tags associated with the resource.
Add new tag
You can add up to 50 more tags.
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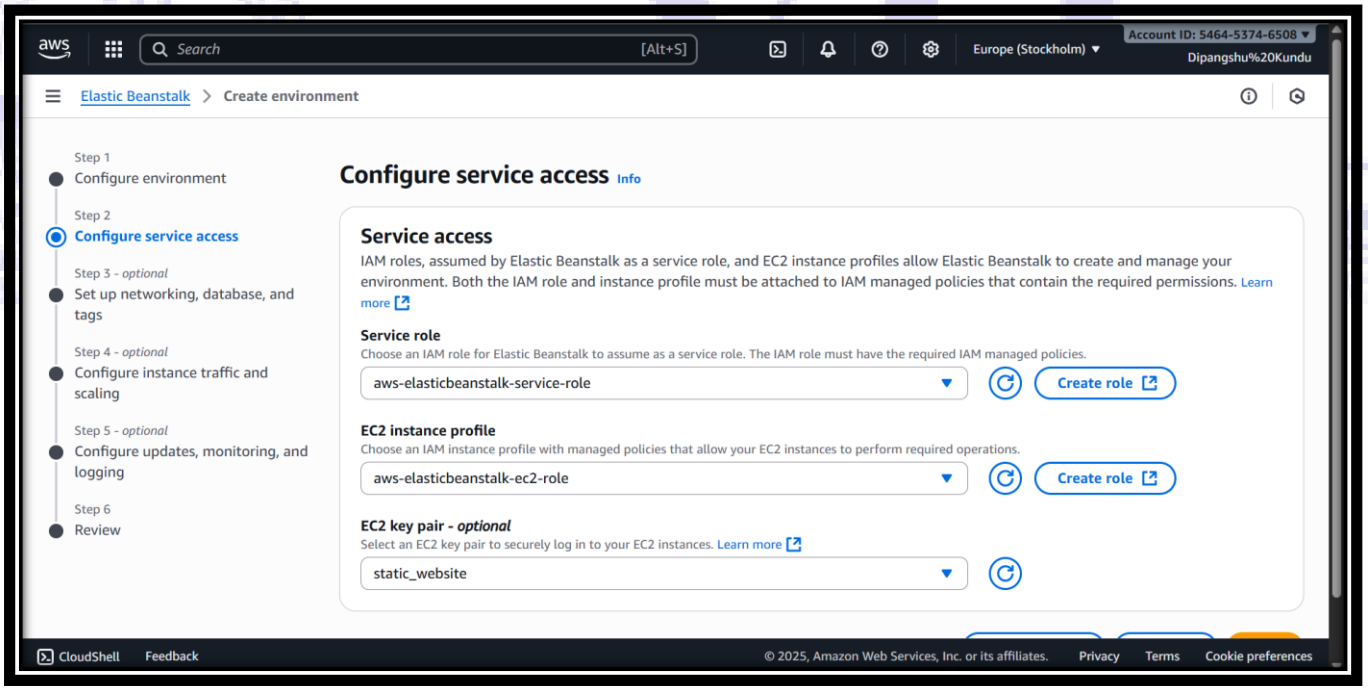
aws
Search
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Europe (Stockholm)
Account ID: 5464-5374-6508
Dipangshu%20Kundu
Elastic Beanstalk > Create environment
Step 1
Configure environment
Step 2
Configure service access
Step 3 - optional
Set up networking, database, and tags
Step 4 - optional
Configure instance traffic and scaling
Step 5 - optional
Configure updates, monitoring, and logging
Step 6
Review
Configure service access Info
Service access
IAM roles, assumed by Elastic Beanstalk as a service role, and EC2 instance profiles allow Elastic Beanstalk to create and manage your environment. Both the IAM role and instance profile must be attached to IAM managed policies that contain the required permissions. Learn more
Service role
Choose an IAM role for Elastic Beanstalk to assume as a service role. The IAM role must have the required IAM managed policies.
aws-elasticbeanstalk-service-role
Create role
EC2 instance profile
Choose an IAM instance profile with managed policies that allow your EC2 instances to perform required operations.
aws-elasticbeanstalk-ec2-role
Create role
EC2 key pair - optional
Select an EC2 key pair to securely log in to your EC2 instances. Learn more
static_website
CloudShell
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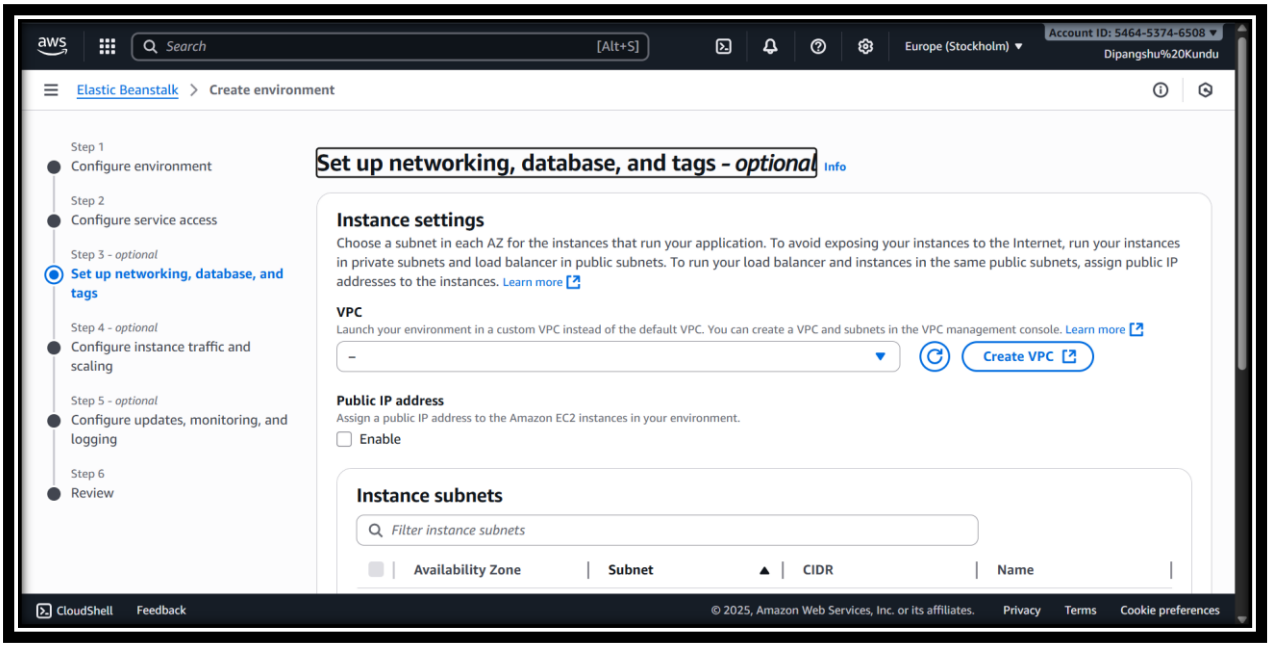
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Europe (Stockholm)
Account ID: 5464-5374-6508
Dipangshu%20Kundu
Elastic Beanstalk
Create environment
Step 1
Configure environment
Step 2
Configure service access
Step 3 - optional
Set up networking, database, and tags
Step 4 - optional
Configure instance traffic and scaling
Step 5 - optional
Configure updates, monitoring, and logging
Step 6
Review
Set up networking, database, and tags - optional
Info
Instance settings
Choose a subnet in each AZ for the instances that run your application. To avoid exposing your instances to the Internet, run your instances in private subnets and load balancer in public subnets. To run your load balancer and instances in the same public subnets, assign public IP addresses to the instances.
Learn more
VPC
Launch your environment in a custom VPC instead of the default VPC. You can create a VPC and subnets in the VPC management console.
Learn more
-
Create VPC
Public IP address
Assign a public IP address to the Amazon EC2 instances in your environment.
Enable
Instance subnets
Filter instance subnets
Availability Zone
Subnet
CIDR
Name
CloudShell
Feedback
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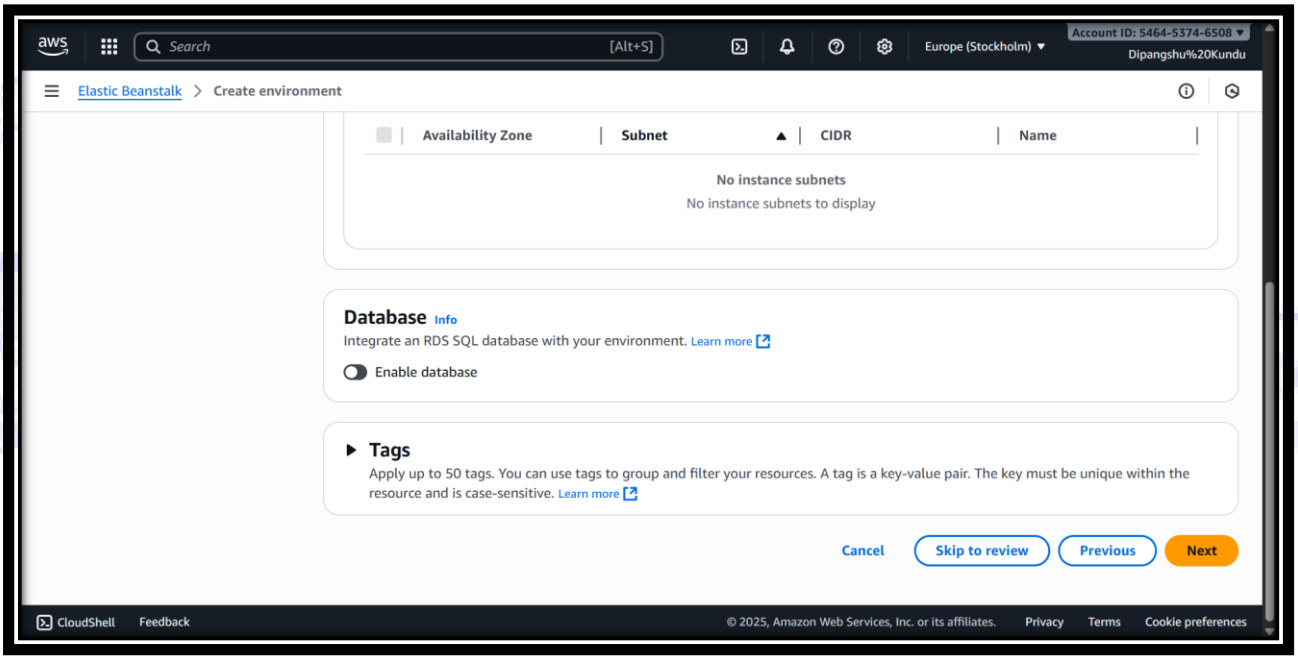
aws
Search
[Alt+S]
Europe (Stockholm)
Account ID: 5464-5374-6508
Dipangshu%20Kundu
Elastic Beanstalk
Create environment
Availability Zone
Subnet
CIDR
Name
No instance subnets
No instance subnets to display
Database
Info
Integrate an RDS SQL database with your environment.
Learn more
Enable database
Tags
Apply up to 50 tags. You can use tags to group and filter your resources. A tag is a key-value pair. The key must be unique within the resource and is case-sensitive.
Learn more
Cancel
Skip to review
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Next
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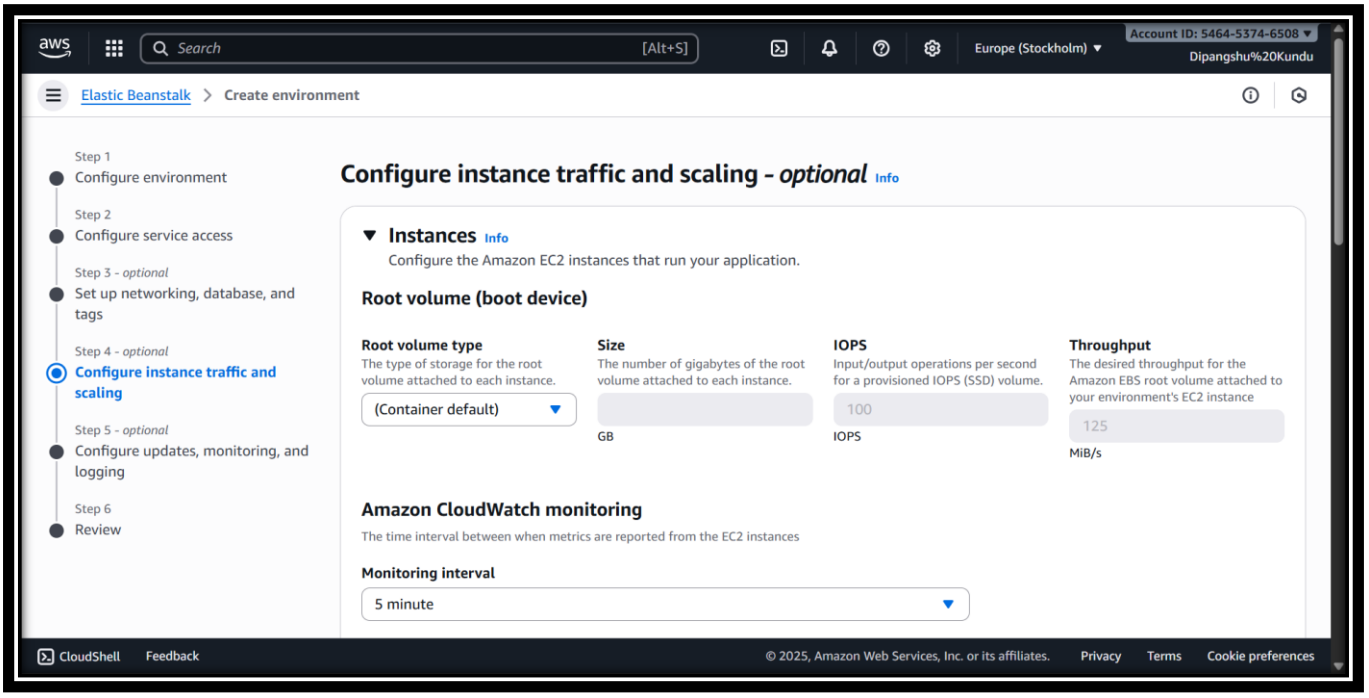
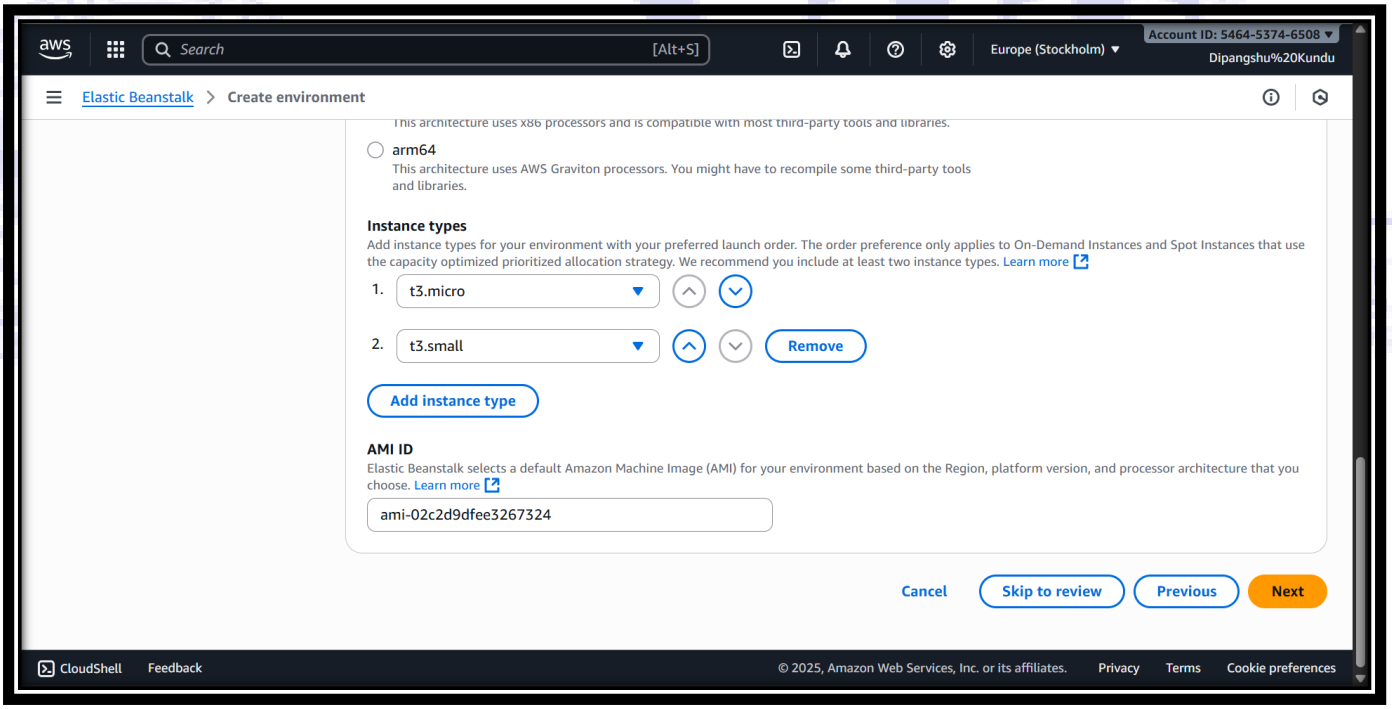
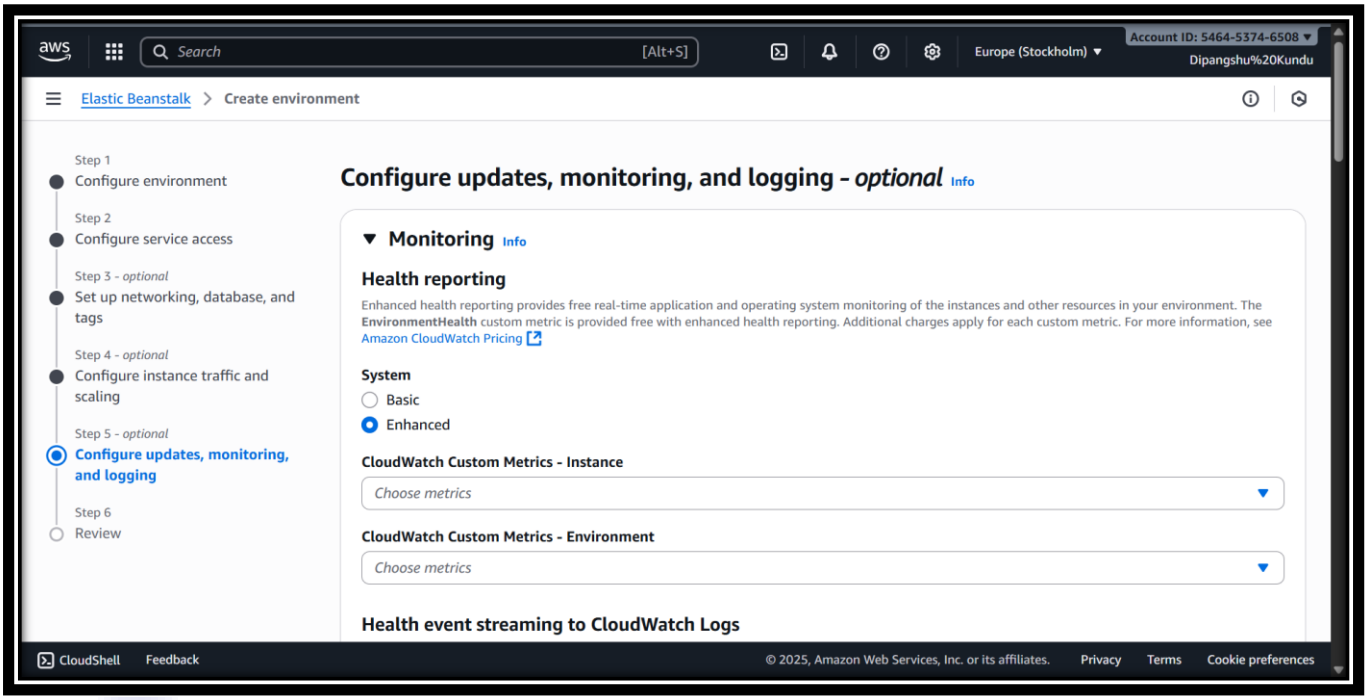
SUBMITTING THE REVIEW



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Europe (Stockholm)
Account ID: 5464-5374-6508
Dipangshu%20Kundu
Elastic Beanstalk
Create environment
Step 1
Configure environment
Step 2
Configure service access
Step 3 - optional
Set up networking, database, and tags
Step 4 - optional
Configure instance traffic and scaling
Step 5 - optional
Configure updates, monitoring, and logging
Step 6
Review
Configure updates, monitoring, and logging - optional Info
Monitoring Info
Health reporting
Enhanced health reporting provides free real-time application and operating system monitoring of the instances and other resources in your environment. The EnvironmentHealth custom metric is provided free with enhanced health reporting. Additional charges apply for each custom metric. For more information, see Amazon CloudWatch Pricing
System
Basic
Enhanced
CloudWatch Custom Metrics - Instance
Choose metrics
CloudWatch Custom Metrics - Environment
Choose metrics
Health event streaming to CloudWatch Logs
CloudShell
Feedback
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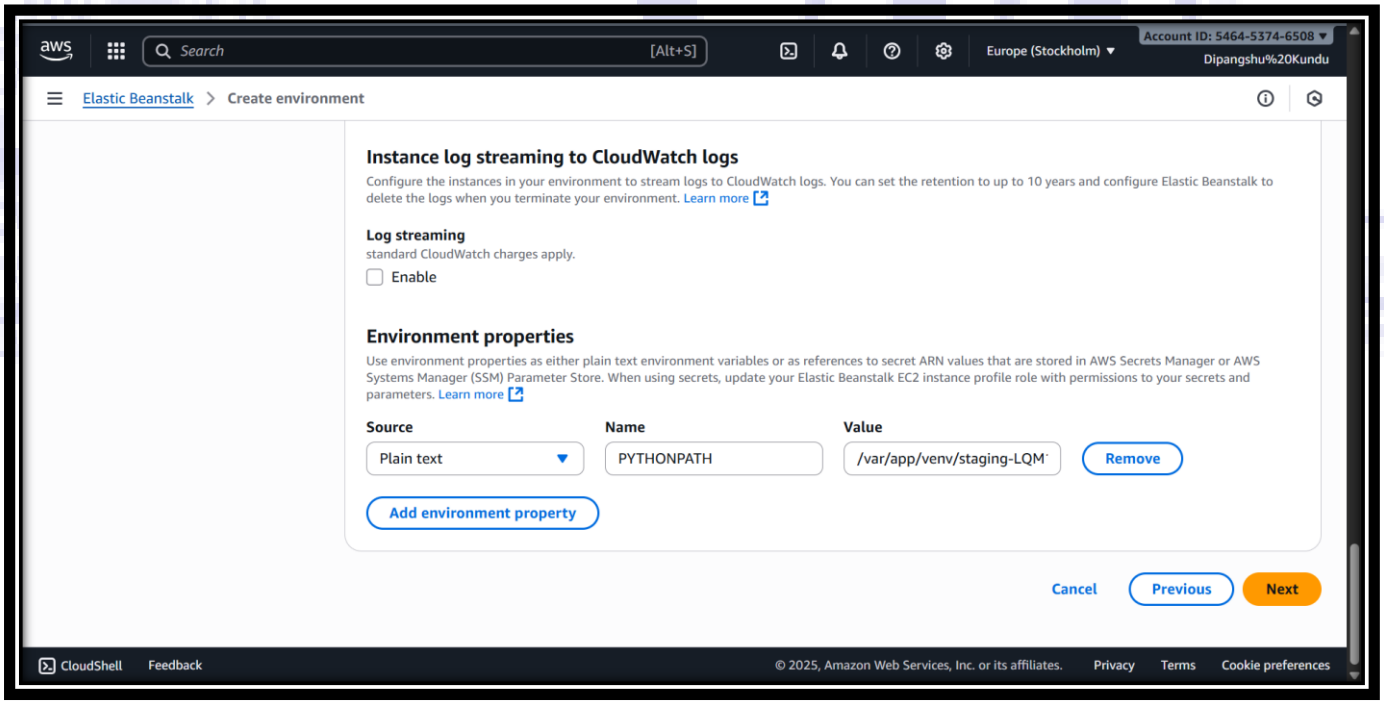
aws
Search
[Alt+S]
Europe (Stockholm)
Account ID: 5464-5374-6508
Dipangshu%20Kundu
Elastic Beanstalk
Create environment
Instance log streaming to CloudWatch logs
Configure the instances in your environment to stream logs to CloudWatch logs. You can set the retention to up to 10 years and configure Elastic Beanstalk to delete the logs when you terminate your environment. Learn more
Log streaming
standard CloudWatch charges apply.
Enable
Environment properties
Use environment properties as either plain text environment variables or as references to secret ARN values that are stored in AWS Secrets Manager or AWS Systems Manager (SSM) Parameter Store. When using secrets, update your Elastic Beanstalk EC2 instance profile role with permissions to your secrets and parameters. Learn more
Source
Name
Value
Plain text
PYTHONPATH
/var/app/venv/staging-LQM
Remove
Add environment property
Cancel
Previous
Next
CloudShell
Feedback
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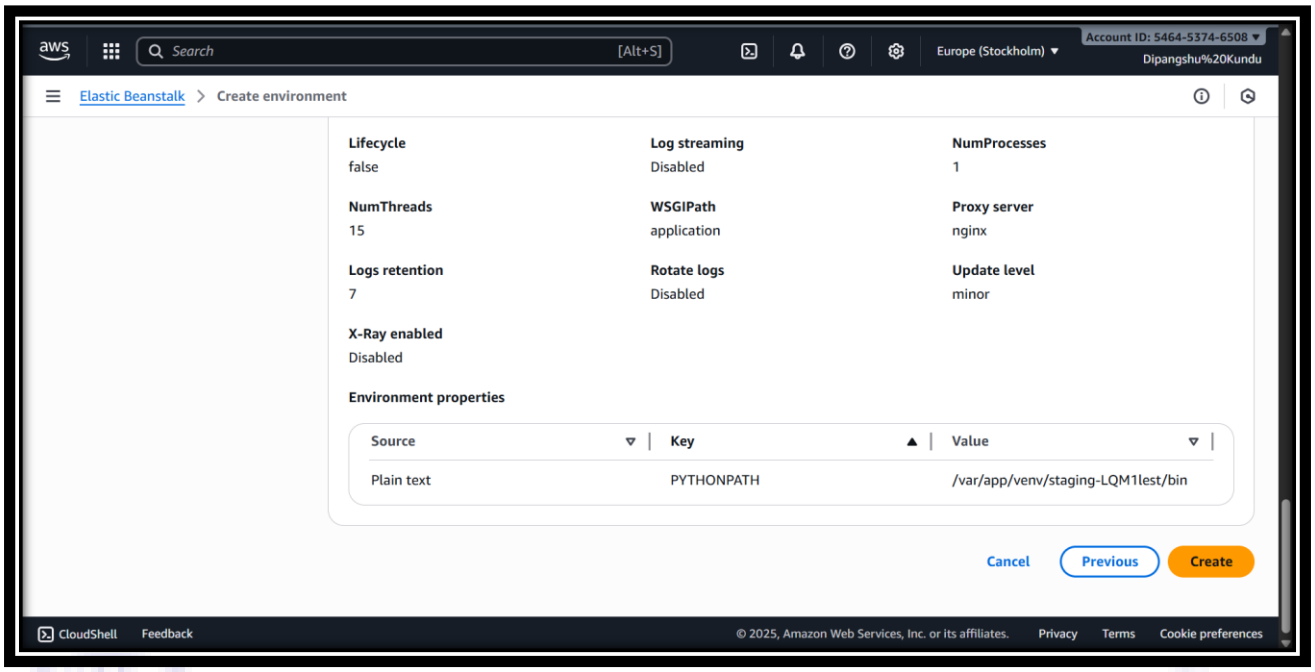
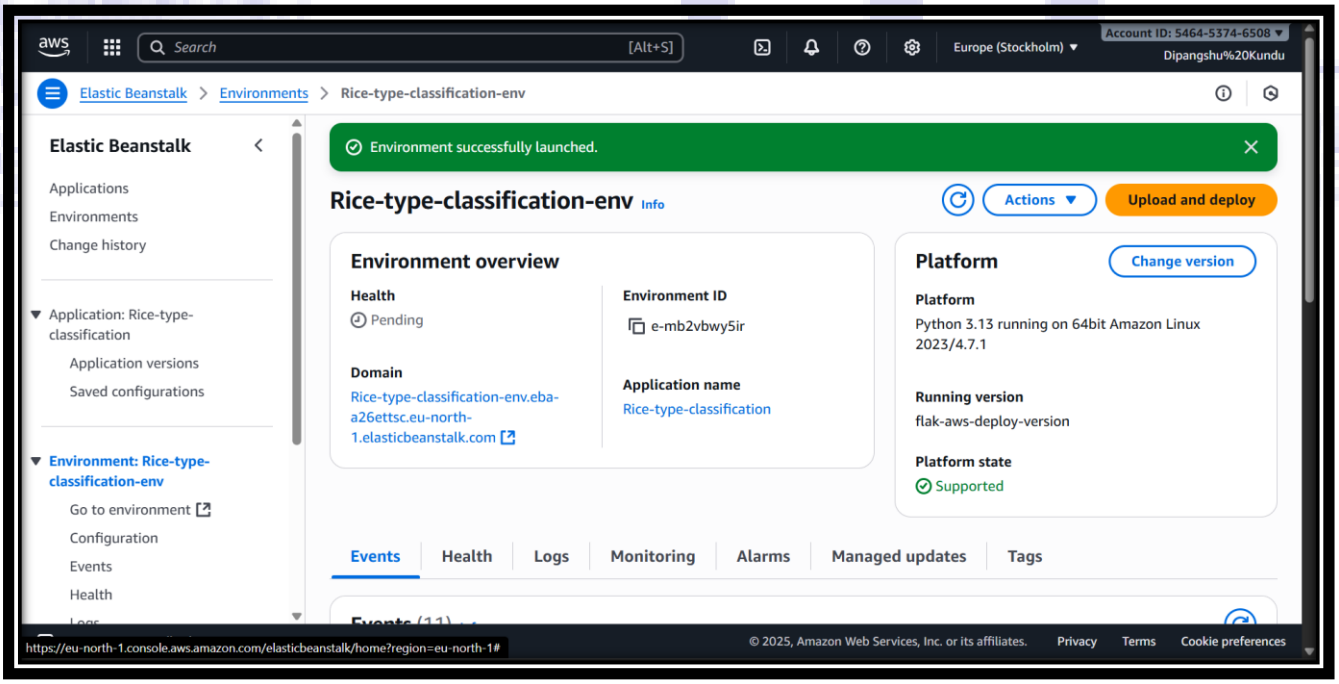
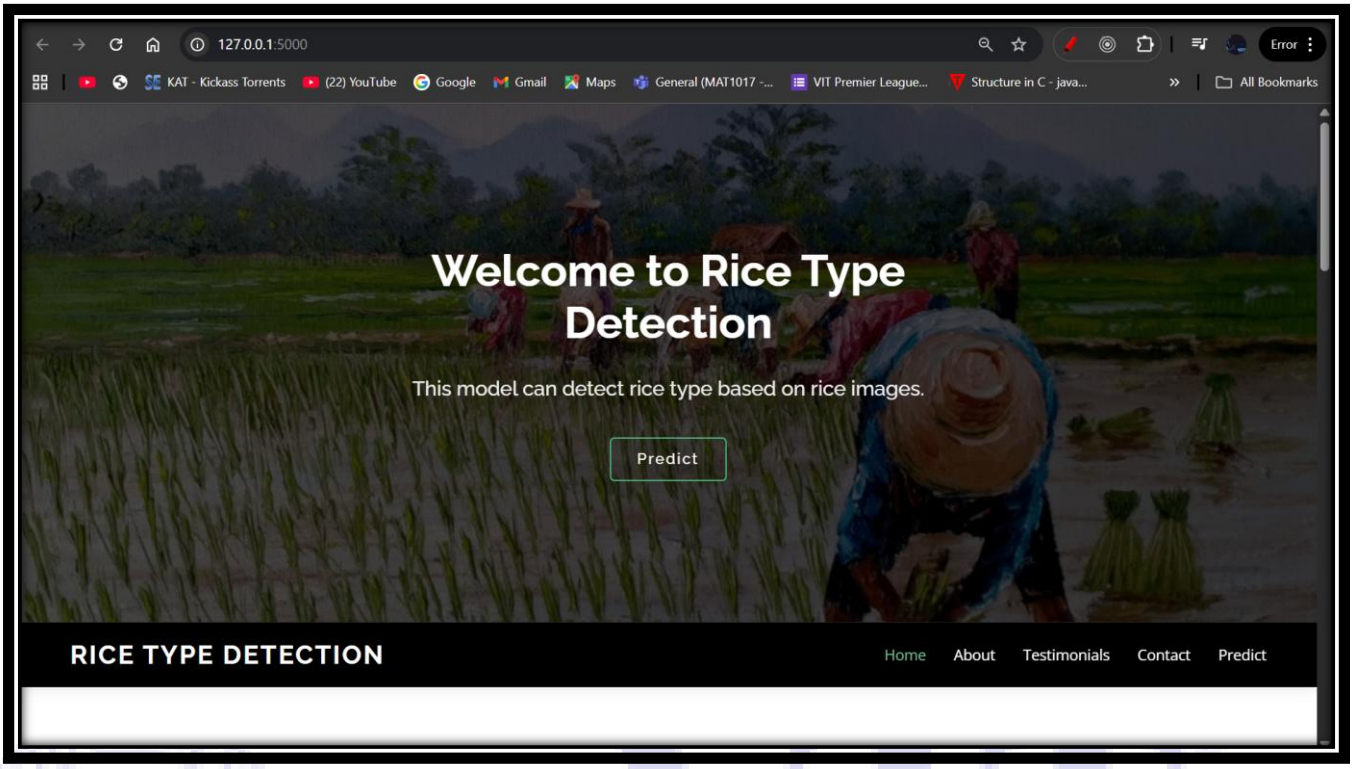
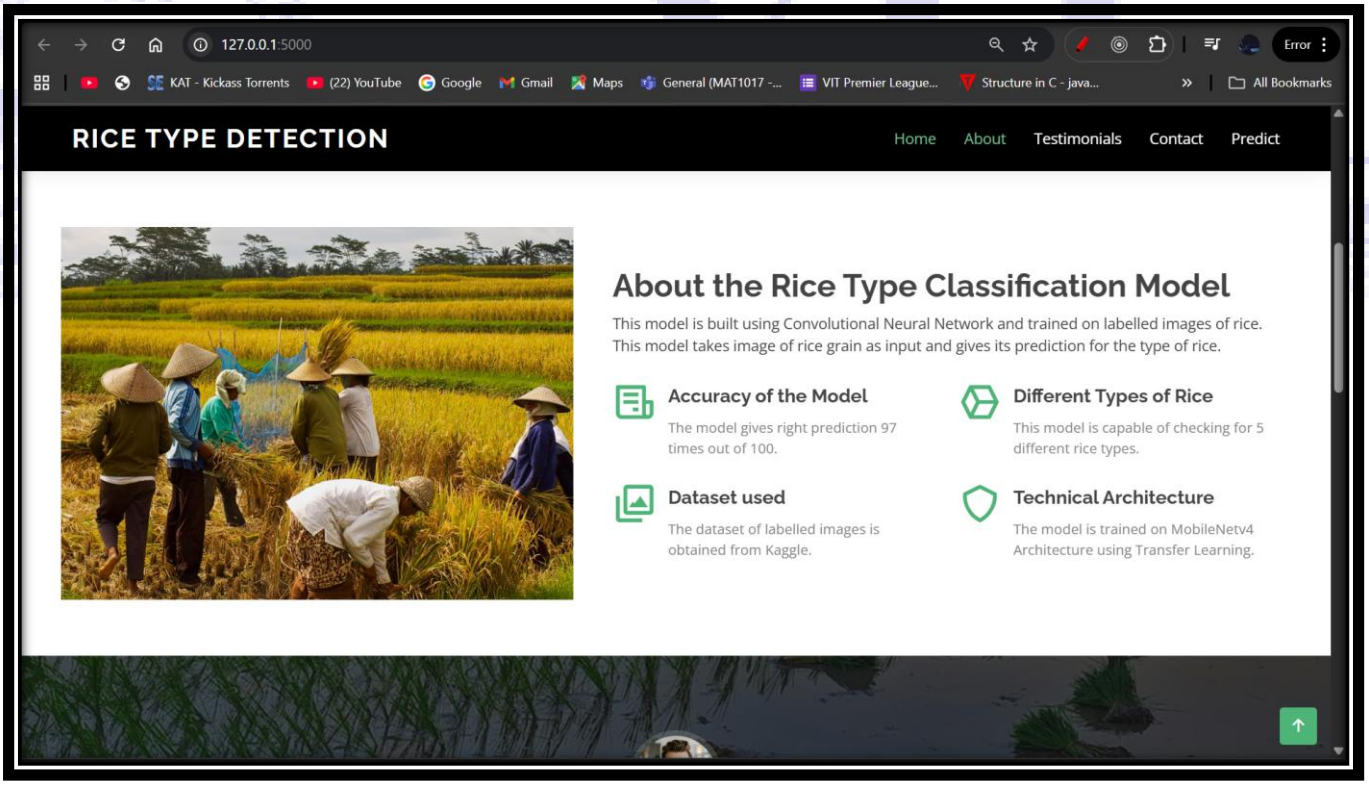


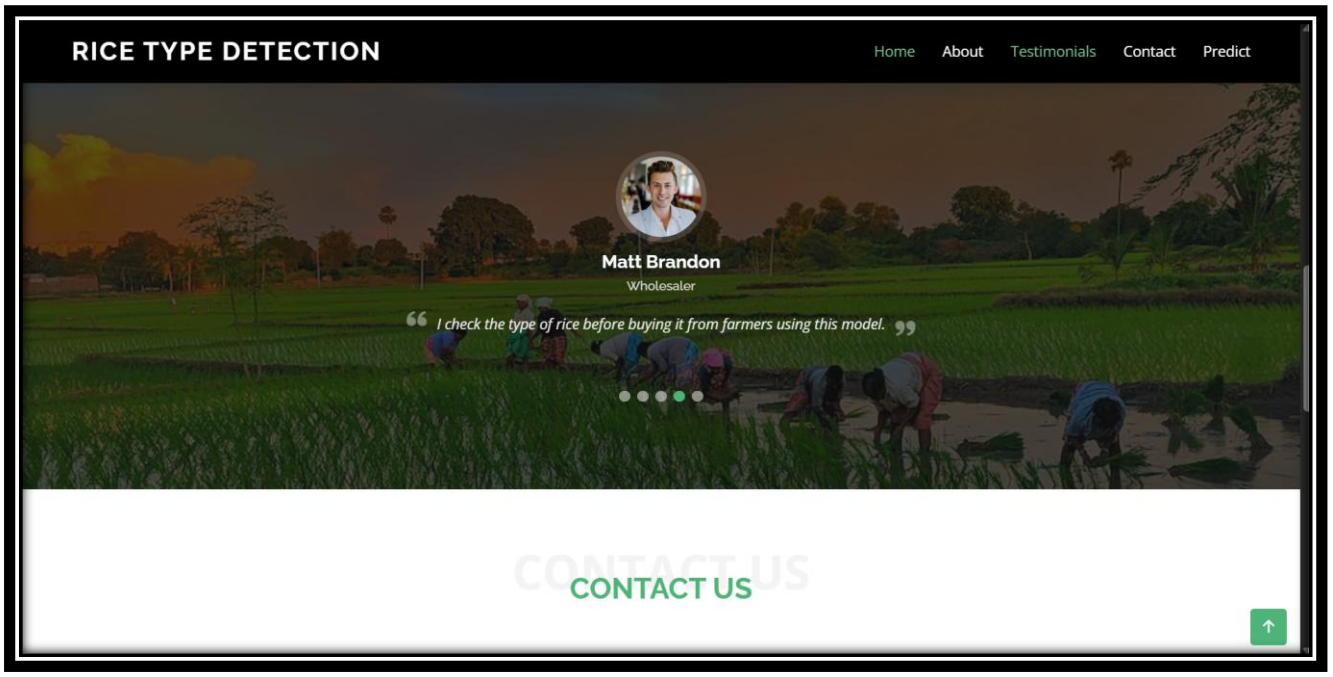
ENVIRONMENT SUCCESSFULLY LAUNCHED

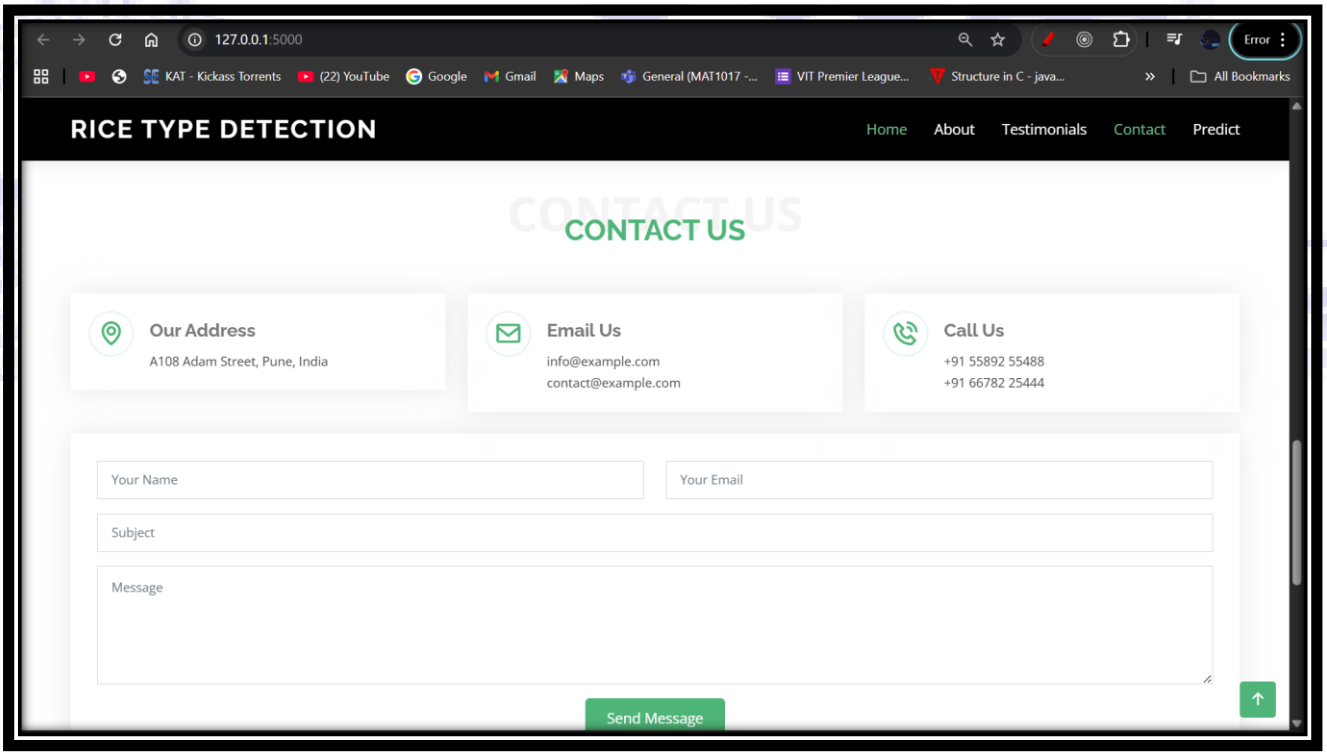


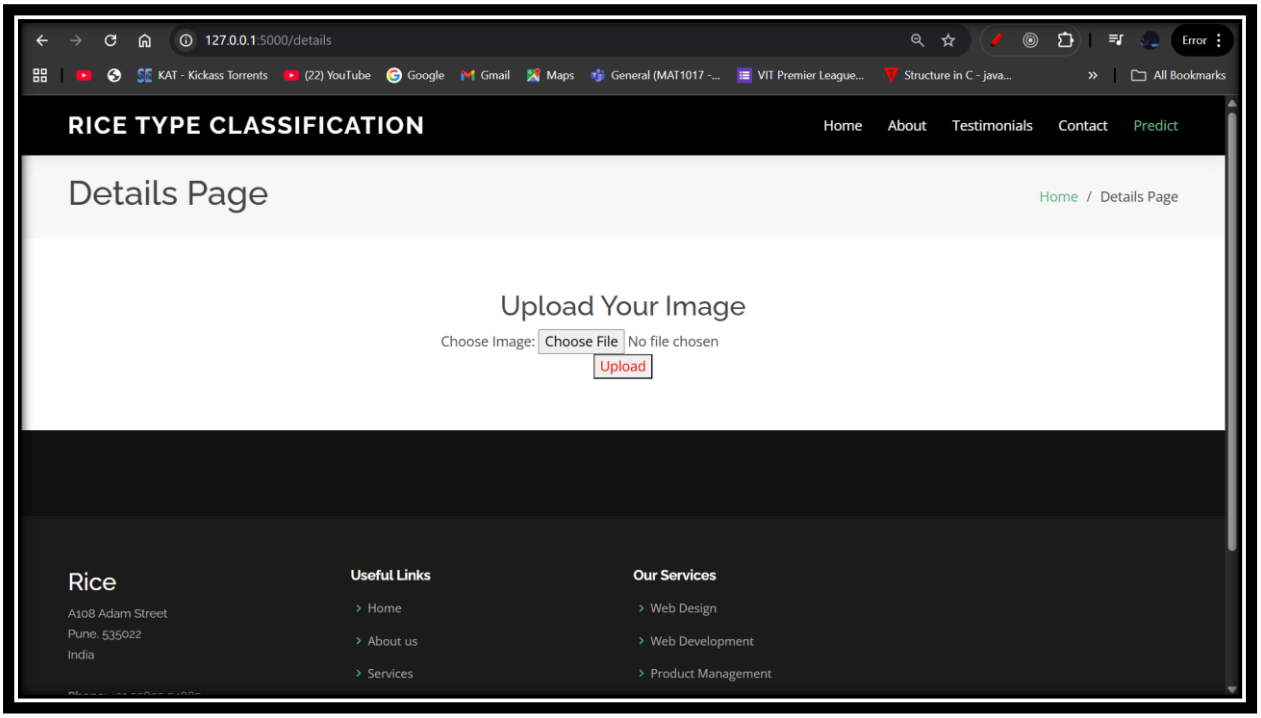
OUTPUT SCREENSHOTS:






RICE TYPE DETECTION
Home
About
Testimonials
Contact
Predict
Matt Brandon
Wholesaler
I check the type of rice before buying it from farmers using this model.
CONTACT US


127.0.0.1:5000
Error
KAT - Kickass Torrents
(22) YouTube
Google
Gmail
Maps
General (MAT1017 -...
VIT Premier League...
Structure in C - java...
All Bookmarks
RICE TYPE DETECTION
Home
About
Testimonials
Contact
Predict
CONTACT US
Our Address
A108 Adam Street, Pune, India
Email Us
info@example.com
contact@example.com
Call Us
+91 55892 55488
+91 66782 25444
Your Name
Your Email
Subject
Message
Send Message



WEBSITE LINK FROM AWS ELASTIC BEANSTALK(THIS LINK WILL NOT WORK AFTER A CERTAIN TIME DUE TO ITS FREE TIER NATURE)

Click_Here_To_Be_Redirected

Below is the output, on clicking the above link we will be redirected: