



# COMMUNITY DAY

— AHMEDABAD —



**COMMUNITY DAY**

# Supercharge your productivity with GenAI on AWS

Vivek Raja P S

VP Product, Nexstem

AWS ML Hero | AWS UG Madurai Founder & Lead



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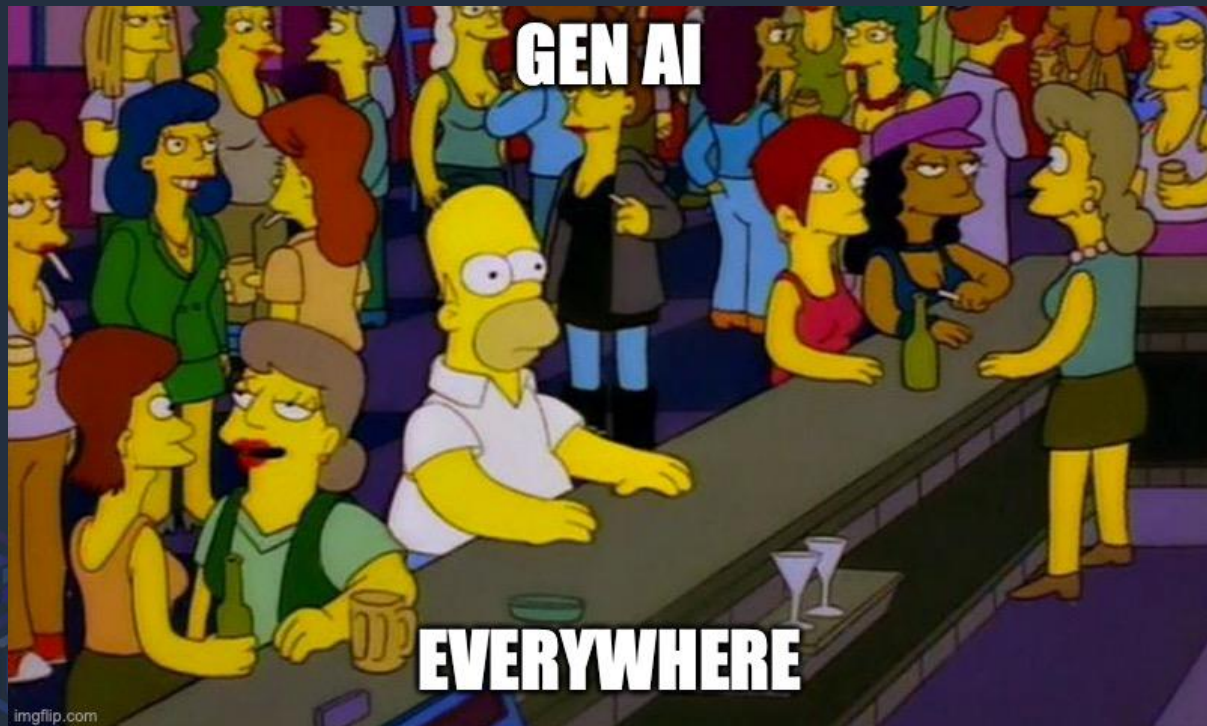
## What I do...

- VP of Product at Nexstem (YourStory Tech30 startup winner!)
- AWS ML Hero (*Youngest ever!*)
- Recipient of Invent & Simply Award ( at AWS Community Leaders Summit 2022! )
- Founder and Lead at AWS User Group Madurai (*Nominated as Best UG 2022 & 2023!*)
- Multi-cloud certified | Guinness World Record Holder (Thanks to AWS!)
- Published many research papers (recent one at IIM-B!) in AI and hold two patents
- 80+ Hackathon Winner & Participant and Jury
- Mentor | Blogger | Content Creator
- Moviebuff | Go-kart racing enthusiast | Plays guitar occasionally | Professional reels sender





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Agenda is fairly simple...

- Amazon PartyRock for Newbies.. (or anyone! )
- Amazon CodeWhisperer for Devs
- Amazon Q for Business ( and beyond!)



Gotta make the last session  
interesting



Imagine a generative AI App for  
your own use case



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**CREATE YOUR  
CUSTOM  
GENERATIVE AI APP**

**NO CODING  
REQUIRED**

**FREE  
OF COST**

**PUBLISH  
YOUR APP**







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PartyRock My Apps Discover

## PartyRock

Everyone can build  
AI apps.

Haiku Creator

Weird Tour Guide

Podcast Generator

Build your own app

App builder

Generate a 5-7-5 syllable haiku poem and a visual image based on user input.



User Input

winter

Generated Haiku LLM

Here is a 5-7-5 syllable haiku poem about winter:

Snowflakes falling down Blanketing  
the ground in white Winter's cold  
embrace

Visual LLM



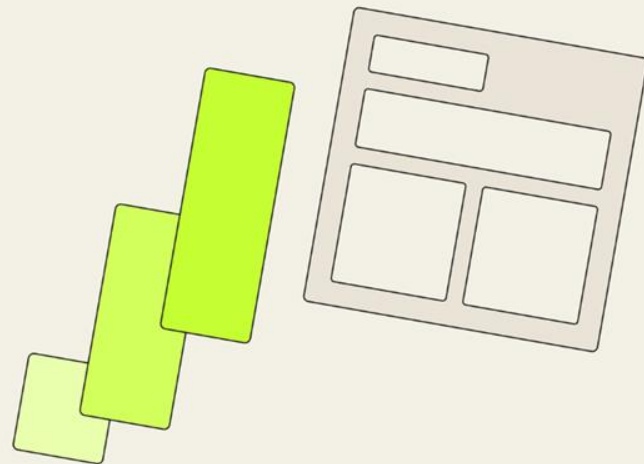


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## Access to powerful foundation models from Amazon Bedrock.

Amazon Bedrock is a fully managed service that makes foundation models (FMs) from Amazon and leading AI companies available on AWS. It is the easiest way to build and scale generative AI applications with foundation models. PartyRock provides builders with access to FMs from Amazon Bedrock in an intuitive and code-free app-building playground to learn the fundamentals of prompt engineering and generative AI.



Let's create a Gen AI app right  
away!



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Now it's your chance to  
create Gen AI App and win  
exciting prizes from AWS



AWS  
User Groups  
Madurai

PRESENTS

## AWS PartyRock Competition

Develop Generative AI Apps under one minute

**No Coding required! Free of cost!**

Get Digital Badges for verified submission  
Stand a chance to win prize from AWS!



**Register today!**

<https://bit.ly/partyrockmdu>




Follow us @awsugmdu




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## A day in developer life of Vivek....

I login into work and see a new task assigned...

 NEW TASK \*

Upload all 'CSV' data in 'temp' folder to s3 bucket 'code-demo'

 Vivek Raja P S

 0 comments

Add tag

State	<input checked="" type="radio"/> To Do	Area	CICD Test
Reason	New task	Iteration	CICD Test

### Description

Write python function to

- iteratively read all `csv` data in 'temp' folder
- upload the `csv` data to s3 bucket 'code-demo'



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A day in developer life of Vivek....

Time to nail the task.....



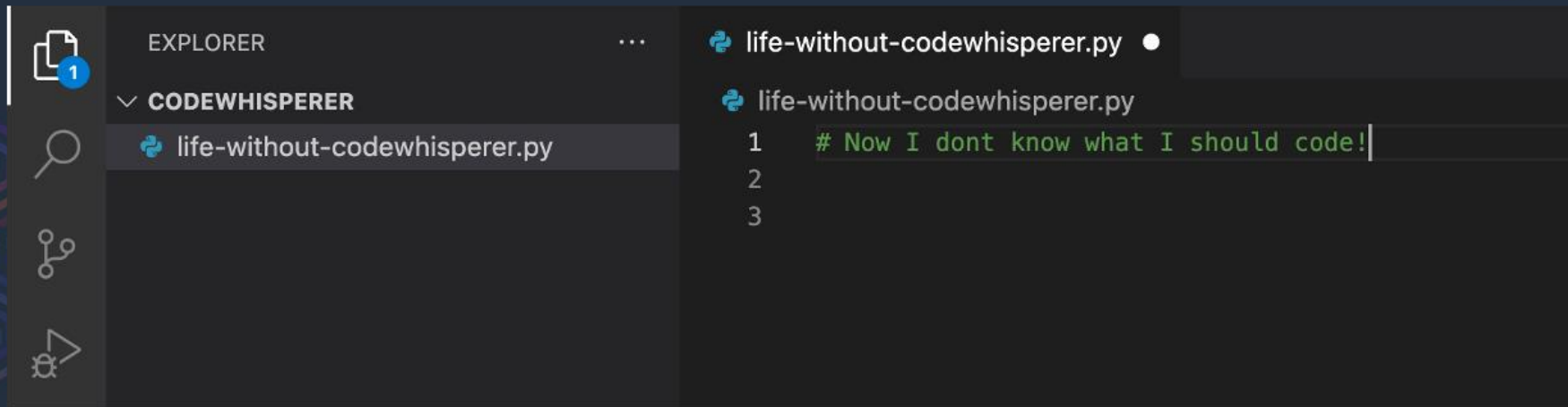




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## A day in developer life of Vivek....

I choose my favourite IDE – Its VSCode (no doubt!)





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## A day in developer life of Vivek....

I head over to Stackoverflow (like everyone else) to get the relevant code





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A day in developer life of Vivek....

I got the relevant piece of code!

The screenshot shows the Stack Overflow website interface. The top navigation bar includes the Stack Overflow logo, links for 'About', 'Products', and 'For Teams', and a search bar. The left sidebar contains a 'Home' link and a 'PUBLIC' section with 'Questions' (highlighted), 'Tags', and 'Users'. The main content area displays a question titled 'boto3' with a subtitle 'upload example'. Below the title, a code block contains the following Python code:

```
import boto3
s3 = boto3.resource('s3')
bucket = s3.Bucket('mybucket')
s3.Object('mybucket', 'hello.txt').put(Body=open('/tmp/hello.txt', 'rb'))
```



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A day in developer life of Vivek..

```
3 # I got the code from the Stackoverflow
4 import boto3
5 import os
6 def upload_to_s3(file, bucket, objname):
7
8
9     s3 = boto3.resource('s3')
10    bucket = s3.Bucket(bucket)
11    s3.Object(bucket, objname).put(Body=open(file, 'rb'))
12
13
14 def csv_files_from_folder(folderpath):
15     path = folderpath
16     table_list = []
17
18     for filename: str
19         if filename.endswith('.csv'):
20             table_list.append(path + "\\" + filename)
21     return table_list
22
23
24 files = csv_files_from_folder("tempfolder")
25 for file in files:
26     upload_to_s3(file, "codedemo", file)
27
```







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## Amazon CodeWhisperer is your **ML Powered coding companion**

- generates code recommendations based on their comments and method names
- Powered by Machine Learning
- Real-time customized code recommendations for all your Java, Python, and JavaScript projects.
- Empower developers to responsibly use artificial intelligence (AI) to create syntactically correct and secure applications.







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But what if I had Amazon CodeWhisperer



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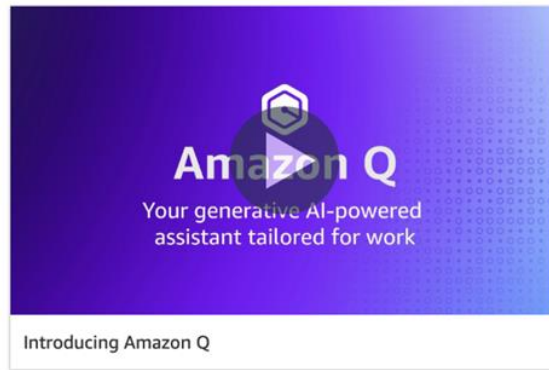
Before I introduce you to Amazon  
Codewhisperer...



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## Welcome to a new world of work with Amazon Q

Amazon Q can help you get fast, relevant answers to pressing questions, solve problems, generate content, and take actions using the data and expertise found in your company's information repositories, code, and enterprise systems. When you chat with Amazon Q, it provides immediate, relevant information and advice to help streamline tasks, speed decision-making, and help spark creativity and innovation at work.



## Areas of expertise

Your business

[AWS](#)

[Amazon QuickSight](#)

[Amazon Connect](#)

[AWS Supply Chain](#)



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The screenshot shows the Amazon Q chat interface within the AWS console. The interface is dark-themed. At the top, there are two tabs: "AMAZON Q (PREVIEW): CHAT" and "Meet Amazon Q (Preview)". The main chat area displays a welcome message from Amazon Q, a purple "Ask a question" button, and a note about CodeWhisperer inline suggestions. On the left, a sidebar contains a search icon, a list of chat sessions, and a detailed description of Amazon Q's capabilities. At the bottom of the sidebar is a text input field with a send button. The bottom of the main chat area shows a token usage indicator and a link to the AWS Responsible AI Policy.

AMAZON Q (PREVIEW): CHAT ... Meet Amazon Q (Preview) X

Chat X +

Hi, I'm Amazon Q. I can answer your software development questions. Ask me to explain, debug, or optimize your code. You can enter / to see a list of quick actions.

Try Examples:

Explain selected code

How can Amazon Q help me?

Ask a question or enter ... ➔

4000/4000

Use of Amazon Q is subject to the [AWS Responsible AI Policy](#).

CodeWhisperer inline suggestions are also enabled. [Try examples](#)

Available as part  
of AWS Toolkit  
extension



# COMMUNITY DAY

AMAZON Q (PREVIEW): CHAT

Chat × +

How to read content from S3 bucket and display the content of the CSV file by pandas dataframe in python

Here is how you can read content from an S3 bucket and display the content of a CSV file using a pandas dataframe in Python: [1]

First, import the necessary libraries:

```
import pandas as pd
import boto3
```

python [Insert at cursor](#) [Copy](#)

Use the Boto3 library to connect to S3 and retrieve the file object:

```
s3 = boto3.client('s3')
obj = s3.get_object(Bucket='XXXXXXXXXXXXXXXXX', Key='your_file_name.csv')
```

python [Insert at cursor](#) [Copy](#)

Then use Pandas to load the CSV data into a dataframe:

```
df = pd.read_csv(obj['Body'])
```

python [Insert at cursor](#) [Copy](#)

Finally, you can display the dataframe to view the CSV data:

```
print(df)
```

python [Insert at cursor](#) [Copy](#)

A few things to note:

- Replace 'your\_bucket\_name' and 'your\_file\_name.csv' with the actual name of your S3 bucket and CSV file [2]
- The CSV file must be publicly accessible or you need to provide AWS credentials
- Pandas will infer the data types of each column automatically

Let me know if you have any other questions!

Sources

Ask a question or enter "/" for quick actions

4000/4000

Use of Amazon Q is subject to the [AWS Responsible AI Policy](#).

Meet Amazon Q (Preview) ×

Hello! I'm Amazon Q, your generative assistant.

Ask a question

CodeWhisperer inline suggestions are also enabled. [Try examples](#)



# Amazon Q is not just your dev assistant but also ...

Also helps you with AWS and its best practices

AMAZON Q (PREVIEW): CHAT

Chat × +

- Debug and fix code
- Refactor code

what are the best practices of cleaning data using AWS Datawrangler

Here are some best practices for cleaning data using Amazon SageMaker Data Wrangler: [1]

- Use the data quality and insights report to automatically detect data issues like missing values, outliers, duplicates, etc. This helps identify data that needs cleaning. [2]
- Leverage the built-in transformations for tasks like handling missing data, converting data types, normalizing values, filtering rows, etc. This avoids writing custom code.
- For data transformations that require custom logic, use Python scripts integrated with Data Wrangler. This allows reusing code across projects.
- Document each data cleaning step so the process is repeatable and auditable. Data Wrangler allows adding notes to document transformations.
- Perform data validation after cleaning to ensure transformations worked as intended before using the data for modelling.
- Consider profiling the data before and after cleaning to quantify the impact and check for unintended changes.
- Clean data incrementally rather than trying to fix all issues at once. This makes the process manageable.
- For large datasets, use partitioning to parallelize cleaning for better performance.
- Use version control systems like Git to track changes during the iterative cleaning process.
- Allow domain experts to validate data quality after cleaning before deploying models to production.

Let me know if you need help with any specific data cleaning tasks using Amazon SageMaker Data Wrangler! [3]

Sources

[1] What is Data Cleansing? - Data Cleansing Explained - AWS

aws.amazon.com > what-is > data-cleansing

Show more

Suggested follow up questions:

How does Amazon Q work under the hood?

Which AI techniques does Amazon Q use?


What is Amazon Bedrock?

Ask a question or enter "/" for quick actions

4000/4000


Use of Amazon Q is subject to the [AWS Responsible AI Policy](#).

Meet Amazon Q (Preview) ×



# Hello! I'm Amazon Q, your generative assistant.

Ask a question



CodeWhisperer inline suggestions are also enabled. Try examples

# Amazon Q is also your business assistant

Integrates with Amazon Quicksights and generates reports and views from just prompts!

## Welcome to Amazon QuickSight Q

Ask your question and instantly get a visual response

### Not familiar with Q?

1. Select a topic name from the Q bar. A topic represents a subject area that users can ask questions.
2. Type your questions about the topic in natural language.
3. Review answers for your question.

- 1 Select a Topic
- 2 Type a question
- 3 Review how your question was interpreted
- 4 Change chart type

Gen AI is not here to take over  
your jobs but to supercharge your  
productivity!

# That's all folks!

Connect with me

