



# From Idea to Demo: How to Use **AWS** at Hackathons



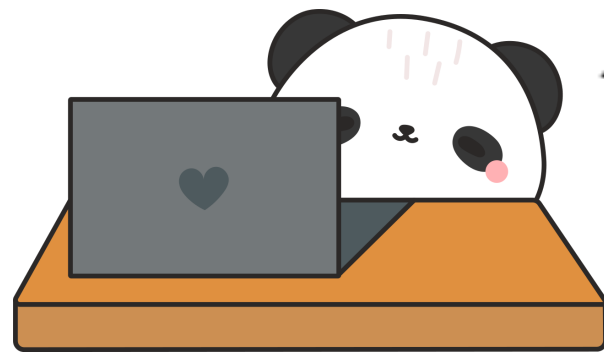
**Build and deploy your first project on the AWS Free Tier**

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MSCS @UMass Amherst | Former Solutions Architect Intern @AWS

Empowering builders to bring ideas to life in the cloud





Hey!



- **MSCS @UMass Amherst**
- Former **Solutions Architect Intern @AWS** Seattle (Summer 2025)
- **3x AWS Certified**
- Former **Software Engineer @VMware** by Broadcom (2021-2024)
- Fun Fact - Prefers hot chocolate over coffee
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# Agenda

01



 The 3 A.M. Hackathon Problem

02



 Intro to Cloud & AWS Basics

03



 Live Demo: Build a Quote-of-the-Day App

04



 Build for free on AWS, Tips and Ideas

05



 Wrap-Up & Q&A

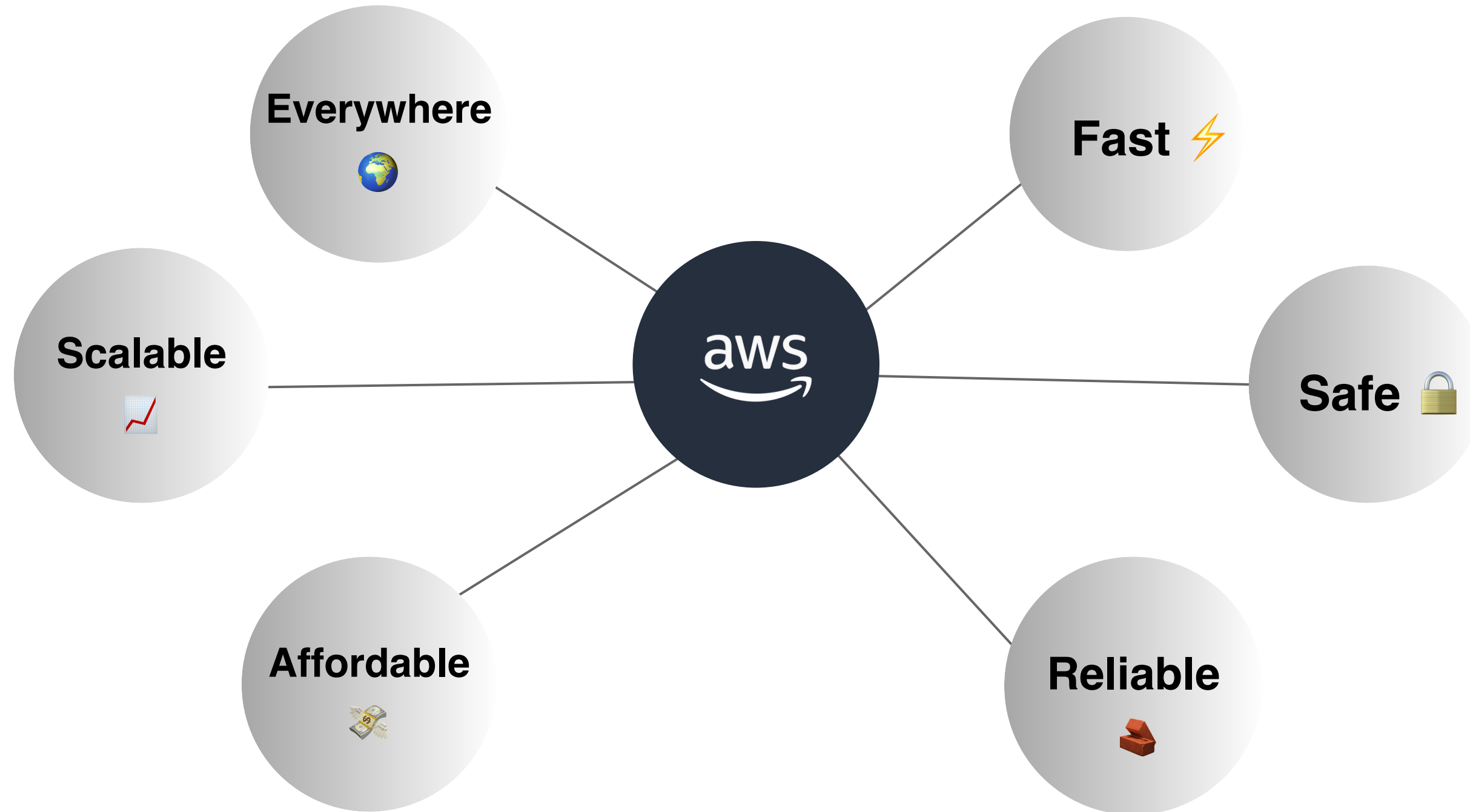


# The 3 A.M. Hackathon Problem 🥵

**You've been coding for 20 hours straight...**

- **✅ Your app finally works, on localhost.**
- **😓 It's 3 A.M., the demo is in two hour, and your laptop crashes.**
- **🔥 Panic mode on: screens freeze, API calls fail, and the judges arrive.**
- **💡 Let's make sure that never happens again: with a little cloud magic ☁️**

# What Even Is the Cloud? ☁️





# How Works - The Restaurant way ☁️



## Menu / Front Desk

What the customer (user) interacts with – your web app or site



## API Waiter

Takes orders from the user and passes them to the kitchen



## Chef

Cooks the dish (runs your code) only when needed



## Kitchen / Storage

Where the ingredients (data) are stored and fetched fast

*Together, they run your app – just like a well-managed restaurant!*

# AWS Basics: our Hackathon Toolbox

## Amazon S3 – Store and Host Your Files

Think of S3 as your project's hard drive in the cloud.

You can upload your HTML, CSS, and images — and instantly get a live website link.



## AWS Lambda – Run Code Without Servers

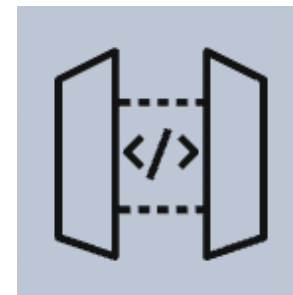
Just upload your code — no setup, no servers.

AWS runs it automatically when someone calls your API.

## API Gateway (Connect Frontend + Backend)

API Gateway gives your Lambda a public URL.

Anyone can call it from a browser or app to get data.

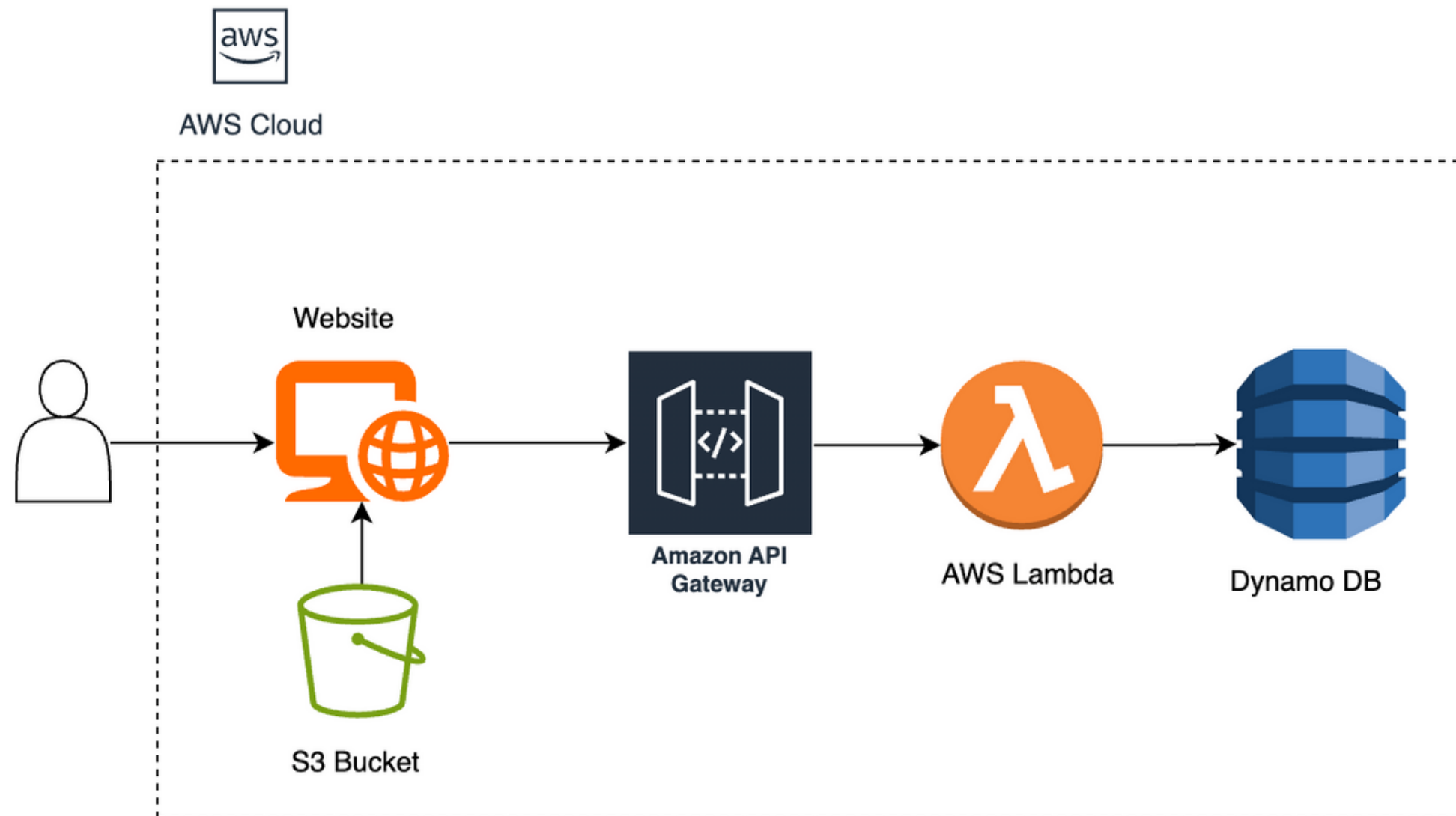


## DynamoDB – Store and Retrieve Data

AWS's NoSQL database — fast, scalable, and serverless.

Save user data, scores, or form entries — all in milliseconds.

# Demo: Quote of the Day App 🗨️



Goal: Build a Quote of the Day app using **AWS Lambda, API Gateway, S3, and DynamoDB**, all on the Free Tier ☁️

What you'll see:

- ◆ **Create → Deploy → Run** — in under 15 minutes!
- ◆ Your own public API returning random quotes
- ◆ Frontend hosted live on the cloud 🌐



# Build for Free on AWS

## **AWS Free Tier**

Try Lambda, S3, API Gateway, and DynamoDB completely free (1M Lambda requests, 25 GB S3, 25 GB DynamoDB / month).

## **AWS Skill Builder**

Free mini-courses on cloud, AI, and serverless basics.

## **AWS Educate / Student Portal**

Get credits, sandbox environments, and beginner labs.

## **Starter Templates & GitHub Samples**

Find plug-and-play code for hackathon ideas.

# AWS Hackathon Tips & Ideas

🕒 Start small, scale fast.  
Focus on one working  
feature first — polish later.

⚡ Test APIs early. Don't  
wait till 3 A.M. —  
deploy and check once  
it's live.

🔑 Use environment  
variables.  
Keep secrets safe, even  
during frantic coding!

🧰 Use AWS templates.  
Save time  
by reusing prebuilt  
Lambda + API stacks.

🗑️ Clean up resources.  
Delete functions/buckets  
after the  
hackathon  
to avoid charges.



Take a boba  
break!




## Resources & Next Steps

1. ☁️ [aws.amazon.com/free](https://aws.amazon.com/free) : Explore the Free Tier
2. 🎓 [aws.amazon.com/education/awseducate](https://aws.amazon.com/education/awseducate) : AWS Educate for students
3. 📖 [skillbuilder.aws](https://skillbuilder.aws) : Free courses
4. 💻 [github.com/aws-samples](https://github.com/aws-samples) : Starter code
5. 🤝 Connect with me: [linkedin.com/in/somya1212](https://linkedin.com/in/somya1212)

# thanks



## Questions?

-  Find me after the session or connect on [LinkedIn](#)
-  Remember: You don't need big servers, just big ideas.