

Getting Started on



for AirAsia Airvolution

This document has links to [Tutorials](#), [Videos](#) and [Hands-on Labs](#) that would serve as a good starting point for Hackathon preparation. Feel free to explore online resources beyond this document, as the website is updated regularly.

Topics:

1. Getting Started – Creating AWS Account and Navigating the Console
2. Building IoT Solutions with AWS IoT
3. Building a Web Application on AWS Elastic Beanstalk
4. Analyze, Process and Visualize large datasets using AWS Analytics toolsets
5. Artificial Intelligence with Amazon AI services
6. Appendix

1. Getting Started – Creating AWS Account and Navigating the Console

- Creating a free tier account: <https://aws.amazon.com/free/>
 - The AWS Free Tier enables you to gain free, hands-on experience with the AWS platform, products, and services for 12 months. For more details, refer to https://aws.amazon.com/s/dm/optimization/server-side-test/free-tier/free_np/
- Using the AWS Management Console: <http://docs.aws.amazon.com/awsconsolehelpdocs/latest/gsg/getting-started.html>

2. Building IoT Solutions with AWS IoT

AWS IoT provides secure, bi-directional communication between Internet-connected things (such as sensors, actuators, embedded devices, or smart appliances) and the AWS cloud. This enables you to collect telemetry data from multiple devices and store and analyze the data. You can also create applications that enable your users to control these devices from their phones or tablets.

Getting Started with AWS IoT

Tutorial: This tutorial shows you how to create resources required to send, receive, and process MQTT messages from devices using AWS IoT.

<http://docs.aws.amazon.com/iot/latest/developerguide/iot-gs.html>

Video: Getting started with AWS IoT

https://www.youtube.com/watch?v=sq_l2J4oyLU

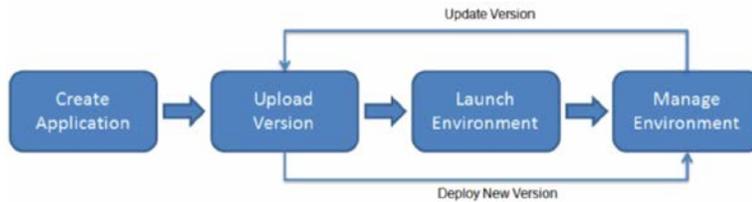
Webinar (with step by step guide): Getting started with AWS IoT

<https://www.youtube.com/watch?v=BfvieRwulvc>

3. Building a Web Application on AWS Elastic Beanstalk

With AWS Elastic Beanstalk, you can quickly deploy and manage applications in the AWS Cloud without worrying about the infrastructure that runs those applications. AWS Elastic Beanstalk reduces management complexity without restricting choice or control. You simply upload your application, and AWS Elastic Beanstalk automatically handles the details of capacity provisioning, load balancing, scaling, and application health monitoring. AWS Elastic Beanstalk uses highly reliable and scalable services that are available in the [AWS Free Usage Tier](#).

AWS Elastic Beanstalk supports applications developed in Java, PHP, .NET, Node.js, Python, and Ruby, as well as different container types for each language. A container defines the infrastructure and software stack to be used for a given environment.



Getting Started Using AWS Elastic

BeanStalk: <http://docs.aws.amazon.com/elasticbeanstalk/latest/dg/Welcome.html>

<http://docs.aws.amazon.com/elasticbeanstalk/latest/dg/GettingStarted.html>

Video: <https://www.youtube.com/watch?v=dvmssHhBnII>

<https://www.youtube.com/watch?v=xhc1boyBkJw&t=357s>

Deploying Spring Boot app on AWS Elastic

Beanstalk: <https://aws.amazon.com/blogs/devops/deploying-a-spring-boot-application-on-aws-using-aws-elastic-beanstalk/>

More tutorials and Samples: <http://docs.aws.amazon.com/elasticbeanstalk/latest/dg/tutorials.html>

- Basics - 10-Minute Tutorials

 Launch a Web Application with AWS Elastic Beanstalk	 Register a Domain Name using Amazon EC2	 Store Multiple Files to Amazon S3 using the AWS CLI	 Update a Web Application with AWS Elastic Beanstalk
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4. Analyze, Process and Visualize large datasets using AWS Analytics toolsets

Today, the amount of data that companies need to analyze is vast. AWS provides analytics tools that can scale to very large data stores efficiently and cost-effectively as well as visualize and get business insights.

Amazon EMR provides a managed Hadoop framework that makes it easy, fast, and cost-effective to process vast amounts of data across dynamically scalable Amazon EC2 instances. You can also run other popular distributed frameworks such as Apache Spark, HBase, Presto, and Flink in Amazon EMR, and interact with data in other AWS data stores such as Amazon S3 and Amazon DynamoDB.

Amazon EMR securely and reliably handles a broad set of big data use cases, including log analysis, web indexing, data transformations (ETL), machine learning, financial analysis, scientific simulation, and bioinformatics.

Amazon QuickSight is a fast, cloud-powered business analytics service that makes it easy to build visualizations, perform ad-hoc analysis, and quickly get business insights from your data. Using our cloud-based service you can easily connect to your data, perform advanced analysis, and create stunning visualizations and rich dashboards that can be accessed from any browser or mobile device.

Amazon EMR:

<https://aws.amazon.com/documentation/emr/>

<http://docs.aws.amazon.com/emr/latest/ManagementGuide/emr-what-is-emr.html>

Video: <https://www.youtube.com/watch?v=Hhj3fOdt7zo>

Amazon QuickSight:

<https://quicksight.aws>

<http://docs.aws.amazon.com/quicksight/latest/user/welcome.html>

Video: https://www.youtube.com/watch?v=C_eT0xRNjCs



5. Artificial Intelligence with Amazon AI services

Amazon AI services help you to build an entirely new generation of apps that can see, hear, speak, understand, and interact with the world around you. AWS offers a family of AI services that provide cloud-native machine learning and deep learning technologies to address different use cases. Amazon AI services bring natural language understanding (NLU), automatic speech recognition (ASR), visual search and image recognition, text-to-speech (TTS), and machine learning (ML) technologies within reach of every developer.

- Amazon Lex make it easy to build sophisticated text and voice chatbots, powered by Alexa.
- Amazon Rekognition provides deep learning-based image recognition.
- Amazon Polly turns text into lifelike speech, and Amazon Machine Learning allows you to quickly build smart ML applications.

Getting Started with Amazon Machine Learning (Amazon ML)

Tutorial: Using Amazon ML to Predict Responses to a Marketing Offer

With Amazon ML, you can build and train predictive models and host your applications in a scalable cloud solution. In this tutorial, we show you how to use the Amazon ML console to create a datasource, build a machine learning (ML) model, and use the model to generate predictions that you can use in your applications.

<http://docs.aws.amazon.com/machine-learning/latest/dg/tutorial.html>

Getting Started with Amazon Rekognition

Tutorial: This tutorial provides topics to get you started using Amazon Rekognition. If you are new to Amazon Rekognition, we recommend that you first review the concepts and terminology presented in Amazon Rekognition: How It Works.

<http://docs.aws.amazon.com/rekognition/latest/dg/getting-started.html>

Video:

<https://www.youtube.com/watch?v=93npbhqmsME>

Getting Started with Amazon Lex

Tutorial: Amazon Lex enables you to build applications using a speech or text interface powered by the same technology that powers Amazon Alexa.

<http://docs.aws.amazon.com/lex/latest/dg/how-it-works.html>

Getting Started with Amazon Polly

Tutorial: Amazon Polly provides simple API operations that you can easily integrate with your existing applications.

<http://docs.aws.amazon.com/polly/latest/dg/getting-started.html>

Appendix: General Resources

- AWS Blog: <https://aws.amazon.com/blogs/aws/>
- AWS YouTube Channel: <https://www.youtube.com/user/AmazonWebServices/videos>
- AWS Labs on Github: <https://github.com/awslabs>
 - Lots of sample codes to speed up your prototyping or experimenting various AWS services
- Qwiklabs (courses and labs, external to AWS): <https://run.qwiklab.com/catalog?locale=en>