

AWS Ramp-Up Guide: Public Health

For Epidemiologists, Public Health Informaticians, and Bioinformaticians

This guide collects cloud-computing learning resources relevant to the needs of a public health organization - specifically for applied epidemiologists, public health informaticians, and bioinformaticians. The *Epidemiologist* path is designed for public health staff who use information systems, survey tools, and other mechanisms to collect qualitative and quantitative data relevant to epidemiologic studies and public health surveillance. They analyze those data with a variety of open source and licensed solutions. The *Public Health Informatician* path focuses on staff who establish information systems to collect and store data, and transform those data into information for decision-making. The *Bioinformatician* path assumes that these data scientists of the laboratory are building data systems to manage genomic sequencing pipelines, building the pipelines themselves, and performing other analytics with laboratory, epidemiologic, and clinical data.

Share your opinion of this Ramp-Up Guide!

Learn the Fundamentals of the AWS Cloud			
Learning Resource		Duration (hrs)	Туре
AWS Cloud Practitioner Essentialsor	Fundamental	6.0	Digital Training
AWS Technical Essentials	Fundamental	4.0	Digital Training

For Epidemiologists...

Analytics in the Cloud			
Learning Resource		Duration (hrs)	Туре
Fundamentals of Analytics on AWS – Part 1	Fundamental	2.0	Digital Training
Fundamentals of Analytics on AWS – Part 2	Fundamental	1.5	Digital Training
Getting Started with AWS Glue	Fundamental	1.0	Digital Training
Getting Started with Amazon QuickSight	Fundamental	1.0	Digital Training
AWS Foundations: Machine Learning Basics	Fundamental	0.5	Digital Training

For Public Health Informaticians...

Modern data analytics for public health			
Learning Resource		Duration (hrs)	Туре
Fundamentals of Analytics on AWS – Part 1	Fundamental	2.0	<u>Digital Training</u>
Fundamentals of Analytics on AWS – Part 2	Fundamental	1.5	Digital Training
Getting Started with AWS Glue	Fundamental	1.0	Digital Training
AWS Foundations: How Amazon SageMaker Can Help	Fundamental	0.5	Digital Training



2

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Getting Started with Amazon QuickSight	Fundamental	1.0	Digital Training
Networking and Security			
Learning Resource		Duration (hrs)	Туре
Introduction to Amazon CloudFront	Fundamental	0.2	Digital Training
Introduction to Amazon API Gateway	Fundamental	0.2	Digital Training
Data transfer and storage			
Learning Resource		Duration (hrs)	Туре
AWS DataSync Primer	Intermediate	1.0	Digital Training
Amazon Simple Storage Service (Amazon S3) Cost Optimization	Advanced	1.0	Digital Training
Data management and analysis			
Learning Resource		Duration (hrs)	Туре
Fundamentals of Analytics on AWS – Part 1	Fundamental	2.0	Digital Training
Fundamentals of Analytics on AWS – Part 2	Fundamental	1.5	Digital Training
Getting Started with AWS Glue	Fundamental	1.0	Digital Training
Introduction to Amazon Athena	Fundamental	0.2	Digital Training
AWS Foundations: How Amazon SageMaker Can Help	Fundamental	0.5	Digital Training
Getting Started with Amazon QuickSight	Fundamental	1.0	Digital Training
For all Public Health Roles			
Additional Resources			
Learning Resource			Туре
What is Cloud Computing?			<u>Video</u>
What is AWS?			<u>Webpage</u>
Modern Data Architecture			<u>Webpage</u>
What is a data lake?			<u>Webpage</u>
AWS Glossary			Webpage



3

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Generate ML predictions directly in Amazon SageMaker Canvas	<u>Video</u>
Create your RStudio on Amazon SageMaker licensed or trial environment in 3 easy steps	Blog
Extract Health Data - Amazon Comprehend Medical - AWS Online Tech Talks	Tech Talk
Understanding and achieving a modern data architecture (re:Invent 2022)	<u>Video</u>
Enabling agility with data governance on AWS	<u>Video</u>
U.S. Census brings nationwide count to the AWS Cloud	Blog
Registry of Open Data on AWS	Webpage
AWS state and local government public health cloud resources	<u>Webpage</u>
Simplifying Permissions & Governance in your Data Lakes	Video
Geospatial ML with Amazon Sagemaker	<u>Video</u>
Implement RStudio on your AWS environment and access your data lake using AWS Lake Formation permissions	Blog
Automatically extracting email attachment data to reduce costs and save time for local public health departments	Blog
Extract Health Data - Amazon Comprehend Medical - AWS Online Tech Talks	Tech Talk
Easy Genomics Solution for Public Health Labs	Blog
Part 1: Introducing Amazon Omics—from sequence data to insights, securely and at scale	Blog
Part 2: Automated End-to-End Genomics Data Storage and Analysis using Amazon Omics	Blog
Amazon Omics Workshop End-to-End	Workshop