VIEW ALL EVENTS

AMAZON WEB SERVICES (AWS)

AWS Machine Learning and Artificial Intelligence Primer

What you'll learn Is this course for you? Schedule

Amazon Web Services (AWS) is the world's most comprehensive and broadly adopted cloud platform, offering over 175 fully featured services from data centers globally. Millions of customers-including the fastest-growing startups, largest enterprises, and leading government agencies-are using AWS to lower costs, become more agile, and innovate faster. One of the powerful aspects of AWS is that it provides ready to use machine learning and artificial intelligence services. These services are based on well trained and tested models that make it easy for users to just provide to receive the output they are looking for (e.g. a prediction of a certain category or a real value number).

Examples of the services provided by AWS (which will be covered in this course) are: - Amazon Translate for language translation - Amazon Comprehend for text and sentiment analysis and natural Language processing (NLP) - Amazon Polly for turning text into lifelike speech (using deep learning) - Amazon Lex for building conversational interfaces into any application using voice and text (using deep learning technologies similar to those used by Alexa) - Amazon Transcribe for converting speech to text (using deep learning) - Amazon Rekognition for video analysis, Facial analysis, recognition and training and deploying scalable machine learning models - Amazon Personalize for personalizing customer experience - Amazon CodeGuru for optimizing source code - Amazon Fraud Detector for identifying potential online fraudulent activities - Amazon Textract for extracting text from documents - Amazon Forecast for accurate time-series forecasting

Being familiar with AWS and its machine learning services is a great asset that is highly demanded in the job market. This course will be your starting point to gain this skill. This course is rich with ideas and hands-on exercises that will enable you to use these services with ease. The course will also include several Python code examples that allow you to use those services programmatically.

What you'll learn and how you can apply it

- Develop an understanding of the power of AWS cloud service
- Become a competent user of the machine learning and artificial intelligence services provided by AWS
- Perform language translation using Amazon Translate
- Become confident in sentiment analysis and natural Language processing (NLP) by Amazon Comprehend
- Perform text-to-speech using Amazon Polly
- Building conversational interfaces using Amazon Lex
- Become familiar with converting speech to text using Amazon Transcribe
- Perform video and image analysis using Amazon Rekognition
- Building and train scalable machine learning models using Amazon Sagemaker
- Become familiar with Amazon Personalize for personalizing customer experience
- Learn Amazon CodeGuru for optimizing source code
- Learn Amazon Fraud Detector for identifying potential online fraudulent activities
- Become familiar with Amazon Textract for extracting text from documents
- Become familiar with Amazon Forecast for accurate time-series forecasting

This course is for you because...

- You are keen to learn how use the machine learning and artificial intelligence services provided by AWS
- You are a Pythonista and wish to extend your skills by learning how to use these services programmatically (using your Python code)
- You would like to gain deeper insight into what these powerful services can do for you or how you can exploit them to perform many useful tasks
- You would like to increase your employability by gaining these skills

Prerequisites

June 7, 2021
6:00 p.m. - 10:00 p.m. GMT+2

You're signed up!

Add to Calendar

Cancel registration

YOUR INSTRUCTOR

Noureddin Sadawi

Dr. Noureddin Sadawi is a consultant in machine/deep learning and data science. He has several years' experience in various areas involving data manipulation and analysis. He received his PhD from the University of...

Read more

- Basic knowledge of AWS
- Familiarity with Python. Students should be relatively comfortable with Python coding practices (i.e. intermediate Python level).

Course Set-up

- Any operating system is fine
- Speedy internet connection
- Python 3.6 or above (Anaconda distribution is highly recommended)
- Intermediate level Python knowledge is required (e.g. knowledge of how to install and use packages, dealing with objects and so on)
- An account on AWS

Recommended Preparation

- Book: Learning Amazon Web Services (AWS): A Hands-On Guide to the Fundamentals of AWS Cloud. By Mark Wilkins. https://www.oreilly.com/library/view/learning-amazon-web/9780135301104/
- Video: MTA 98-381: Introduction to Programming Using Python. By: Brian Overland. https://learning.oreilly.com/videos/mta-98-381-introduction/9780135301623

Recommended Follow-up

- Video: Essential Machine Learning and AI with Python. By: Noah Gift. https://learning.oreilly.com/videos/essential-machine-learning/9780135261118
- Video: AWS Certified Machine Learning Specialty. By: Noah Gift. https://learning.oreilly.com/videos/aws-certified-machine/9780135556597

Schedule

The timeframes are only estimates and may vary according to how the class is progressing.

Part 1: Introduction and Housekeeping, Amazon Transcribe, Translate, Comprehend, Lex and Polly (60 minutes)

- Introduction to the course and AWS account config
- Overview of Amazon Transcribe
- Practical: Amazon Transcribe
- Amazon Transcribe via Python
- Overview of Amazon Translate
- Practical: Amazon Translate
- Amazon Translate via Python
- Overview of Amazon Comprehend
- Practical: Amazon Comprehend
- Amazon Comprehend via Python
- Overview of Amazon Lex
- Practical: Chatbot using Amazon Lex
- Overview of Amazon Polly
- Practical: Amazon Polly
- Amazon Polly via Python

Q&A (10 minutes)

Break (10 minutes)

Part 2: Amazon Rekognition (60 minutes)

- Overview of Amazon Rekognition
- Overview of Object and Scene Detection
- Practical: Object and scene detection using Amazon Rekognition
- Label Detection using Amazon Rekognition via Python
- Overview of Facial Analysis
- Practical: Facial analysis using Amazon Rekognition
- Face Detection using Amazon Rekognition via Python
- Overview of Face/Celebrity recognition
- Practical: Face/Celebrity recognition
- Face/Celebrity Recognition using Amazon Rekognition via Python

- Overview of Face comparison
- Practical: Face Comparison using Amazon Rekognition
- Face Comparison using Amazon Rekognition via Python
- Overview of Text in image analysis
- Practical: Text in image analysis using Amazon Rekognition
- Text in Image Detection using Amazon Rekognition via Python

Q&A (10 minutes)

Break (10 minutes)

Part 3: Amazon SageMaker, Personalize, CodeGuru, Fraud Detector, Textract and Forecast (60 minutes)

- Overview and Tour of Amazon SageMaker
- Overview of Amazon Personalize
- Overview of Amazon CodeGuru
- Overview of Amazon Fraud Detector
- Overview of Amazon Textract
- Overview of Amazon Forecast

Course wrap up and Q&A (10 minutes)