

AI Weather Prediction with AWS SageMaker: 4-Hour Course Agenda Duration: Half Day (4 hours)

Introduction and Course Overview – 15 mins

- Welcome and instructor introduction
- Course objectives and expected outcomes
- Brief overview of the agenda

AWS Services for Weather Prediction – 30 mins

- Introduction to AWS Cloud ecosystem
- Key AWS services for data storage and processing
 - Amazon S3
 - AWS Lambda
 - Amazon EC2
- AWS IAM and security considerations
- Q&A session

Deep Dive into AWS SageMaker – 1.5 hours

- SageMaker architecture and components
- SageMaker Studio overview
- Model development lifecycle in SageMaker
- SageMaker built-in algorithms vs. custom models
- Pricing and cost management

Hands-on: Running a SageMaker Jupyter Notebook – 2 Hours

- Setting up the SageMaker environment
- Accessing and navigating Jupyter notebooks in SageMaker
- Loading weather data into a SageMaker notebook
- Data preprocessing for weather prediction
- Training a simple weather prediction model
- Model evaluation and interpretation
- Guided exercise: Participants work through a pre-configured notebook