

CSCI 4452/5452 **CLOUD COMPUTING**

Fall 2022

Assignment #3: An AWS Application

Due: Dec 7, 11:59p

Credits: 20 points

This assignment was discussed in detail on Nov 10th. Please watch the recording if you missed attending that class.

The goal for this assignment is to gain practical experience with building an end-to-end application using AWS. You will work in groups of 1-3 for this assignment as per your choice. The recommended group size is 2. The deployment of the application should be *entirely automated*.

- All applications should be built using at least 4 of the following AWS services: EC2, Elastic Beanstalk, S3, DynamoDB, Lambda, SQS, SNS, RDS, ECS.
Note: Auxiliary services such as CloudWatch or IAM Role will not be counted among the 4 required services.
- All groups of 2 or more students should use at least one AWS Machine Learning (ML) service in addition to the above.
Note: This ML service is the 5th service that is required for teams of two or more students in addition to the 4 referenced above.
- All groups of 3 students should discuss the project idea in a one-on-one meeting with the instructor to make sure it meets the increased expectations for groups of size 3.

Requirements:

- *By November 19th, the following details should be e-mailed by one of the group members to the instructor:*
 - Group members list.
 - A brief description of the application to be developed along with the list of AWS services that will be used.

- A tentative list of programming language(s) that will be used as part of the project.
- All groups should upload all their code along with documentation for deployment to Moodle by the due date.
- All groups should demonstrate their applications during the final exam time on December 8, 5:30 pm to 7:30 pm. Detailed demo schedule will be announced a week before the demonstration date.

Note:

- You will need to use an AWS Free Tier account to use the services. As discussed in class, please track your usage (click [here](#) for an AWS article on this topic). It is a good idea to configure and pay attention to the e-mail notifications that AWS sends. By default, every user receives these e-mails whenever they utilize 85% of the free-tier usage limits of any AWS service. Also, turn off your services (for example, Lambda functions) when not required. In general, this should not be a problem as AWS has generous limits for all their free-tier services.
- A Discord channel for our class is [here](#). Please join there if you are looking for a teammate. Please reach out to the instructor if you are having trouble with finding a teammate.